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MEADOWLAND NATURAL TREATMENT PROCESSES IN THE LAKE TAHOE BASIN: A Field Investigation

by

F. A. Morris and M. K. Morris
Department of Biological Sciences
The University of Nevada, Las Vegas
Las Vegas, Nevada 89154

and

T. S. Michaud and L. R. Williams
Advanced Monitoring Systems Division
Environmental Monitoring Systems Laboratory
Las Vegas, Nevada 89114

Contract No. 68-03-2619

Project Officer
L. R. Williams
Advanced Monitoring Systems Division
Environmental Monitoring Systems Laboratory
Las Vegas, Nevada 89114

ENVIRONMENTAL MONITORING SYSTEMS LABORATORY
OFFICE OF RESEARCH AND DEVELOPMENT
U.S. ENVIRONMENTAL PROTECTION AGENCY
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*Dept. of Biological Sciences
University of Nevada-Las Vegas, Las Vegas, Nevada 89154

16. ABSTRACT

A request for technical support from EPA's Region IX, led to a study investigating the effectiveness of using natural meadowlands and wetlands to trap nutrients and sediments from surface and storm water runoff before they reach Lake Tahoe.

Seven systems consisting of four streams and three drainage areas were studied. Biweekly samples were collected during the winter and weekly samples were collected for the remaining seasons from September 1977 through August 1978. The study systems can be divided into those which remained channelized and those which spread as sheet flow across meadlowlands. In the channelized systems, phosphorus, nitrogen, suspended sediments, and organic carbon concentrations usually remained unchanged or increased from the inlet to the outlet of the meadow. The sheet flow systems exhibited reductions up to 93% of total P, 71% of NH_3-N, 96% of NO_2-NO_3-N, 82% of Kjeldahl-N, 94% of turbidity, 75% of TOC, 91% of POC, 91% of total residue, and 97% of non-filtrable residue. The effectiveness of nutrient removal in the functional systems approached that of conventionnal tertiary treatment.

Rainfall resulted in elevations in nutrients (28X) and suspended sediments (76X) over base-line concentrations. The most dramatic nutrient and suspended sediment reductions were associated with these episodic events.

While there were seasonal variations noted in the effectiveness of the meadowland treatments, the yearly mean reductions were dramatic.

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a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
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CONTENTS

	Page
Figures	v
Tables	vi
List of Abbreviations and Glossary	viii
Acknowledgments	ix
Introduction	1
Conclusions	3
Recommendations	4
Physical Geography	5
Materials and Methods	8
Field Sampling Methods	8
Laboratory Methods	8
Quality Control	11
Meadowland System Descriptions	13
Trout Creek	13
Upper Truckee River	15
Angora Creek	15
Sawmill Road Drainage	15
Tallac Creek	17
Blackwood Road Drainage	19
Chonokis-Glen Road Drainage	21
Tallac Lagoon Drainage	21
Lake Tahoe Nearshore Lake Sampling	21
Results	24
Trout Creek	24
Upper Truckee River	27
Angora Creek	28
Sawmill Road Drainage System	29
Tallac Creek	29
Blackwood Road Drainage	33
Chonokis-Glen Road Drainage	39
Tallac Lagoon Drainage	39
Lake Tahoe Nearshore Lake Sampling	42
Discussion	45
References	53

CONTENTS (Continued)

		Page
Appendices		
A	Conversion Factors	54
B	Tables B-1 through B-4	55
C	Changes in Constituent Concentrations within the Meadowlands	76
D	Nutrient Contributions from Volcanic Cinder Study	179

FIGURES

Number		Page
1	Lake Tahoe meadowland sampling system locations	6
2	Trout-Cold Creek sampling-sites location map.	14
3	Upper Truckee River sampling-sites location map	16
4	Angora Creek and Sawmill Road Drainage sampling-sites location map	17
5	Tallac Creek sampling-sites location map.	18
6	Blackwood Road Drainage and Chonokis-Glen Road Drainage sampling-sites location map.	20
7	Tallac Lagoon Drainage sampling-sites location map.	22
8	Lake Tahoe nearshore sampling-sites location map.	23
9	Annual suspended sediment loads and annual flow	47

TABLES

Number		Page
1	Tahoe Basin Watersheds.	7
2	Field Measurement and Water Sample Analysis Summary	9
3	Analytical Methods and Precision of Laboratory Analyses	11
4	Trout-Cold Creek: Seasonal Mean Concentrations and Average Percent Change	25
5	Trout Creek Vicinity Street Runoff: Mean Episodic Concentrations	27
6	Upper Truckee River: Mean Concentrations and Average Percent Change	28
7	Angora Creek: Seasonal Mean Concentrations and Average Percent Change	30
8	Sawmill Road Drainage: Mean Concentrations and Average Percent Change	32
9	Tallac Creek: Seasonal Mean Concentrations and Average Percent Change	34
10	Blackwood Road Drainage: Seasonal Mean Concentrations and Average Percent Change of Total Phosphorus (PTOT) in µg/l.	35
11	Blackwood Road Drainage: Seasonal Mean Concentrations and Average Percent Change of Ammonia-Nitrogen (NH_3-N) in µg/l	35
12	Blackwood Road Drainage: Seasonal Mean Concentrations and Average Percent Change of Nitrite and Nitrate-Nitrogen (NO_2+NO_3-N) in µg/l.	36
13	Blackwood Road Drainage: Seasonal Mean Concentrations and Average Percent Change of Kjeldahl-Nitrogen (KJEL-N) in µg/l . . .	36
14	Blackwood Road Drainage: Seasonal Mean Concentrations and Average Percent Change of Turbidity in NTU	37
15	Blackwood Road Drainage: Seasonal Mean Concentrations and Average Percent Change of Specific Conductance in µmhos.	37

Number		Page
16	Blackwood Road Drainage: Seasonal Mean Concentrations and Average Percent Change of Organic Carbon in mg/l	38
17	Blackwood Road Drainage: Seasonal Mean Concentrations and Average Percent Change of Total Residue (TOTRES) in mg/l	38
18	Blackwood Road Drainage: Seasonal Mean Concentrations and Average Percent Change of Total Non-Filtrable Residue (TNFILT) in mg/l	39
19	Blackwood Road Drainage: Seasonal Mean Concentrations and Average Percent Change from Site E03 to E05.	40
20	Chonokis-Glen Road Drainage: Mean Concentrations and Average Percent Change	41
21	Tallac Lagoon Drainage: Mean Concentrations and Average Percent Change	42
22	Nearshore Lake Sampling: Mean Concentrations, Summer 1978.	44
23	Annual Suspended Sediment Loads and Annual Flow	48
24	Summary of Meadowland Treatment Trends Based on Constituent Concentrations.	50

LIST OF ABBREVIATIONS AND GLOSSARY

PTOT	total phosphorus (µg/l)
PORTHO	ortho-phosphorus (µg/l)
PDISS	dissolved phosphorus (µg/l)
NH_3-N	ammonia-nitrogen (µg/l)
NO_2+NO_3-N	nitrite and nitrate-nitrogen (µg/l)
KJEL-N	total Kjeldahl nitrogen (µg/l)
TURB	turbidity in nephelometric turbidity units (NTU)
SPCOND	specific conductance (µmhos)
TALK	total alkalinity (mg/l $CaCO_3$)
TOC	total organic carbon (mg/l)
POC	particulate organic carbon (mg/l)
DOC	dissolved organic carbon (mg/l)
TOTRES	total residue (total solids) (mg/l)
TNFILT	total nonfiltrable residue (suspended sediments) (mg/l)
TFILT	total filtrable residue (dissolved solids) (mg/l)
nutrient	includes all measured forms of nitrogen and phosphorus
episode	rainfall event with at least 0.01 inch of rain

Seasons: The definition of seasons was based on temperature and precipitation trends in the Lake Tahoe Basin. There was a long winter (5.5 months) and relatively short fall, spring, and summer seasons.

Fall:	September 1 - October 31
Winter:	November 1 - April 15
Spring:	April 16 - June 30
Summer:	July 1 - August 31

Land-use zones (adapted from Tahoe Regional Planning Agency Land Use Ordinance):

Low-density residential: single-family dwelling units, up to four dwelling units per acre.

Medium-density residential: single-family dwelling units, up to eight dwelling units per acre.

High-density residential: single-family dwellings, up to fifteen dwelling units per acre; multiperson dwellings up to forty persons per acre; mobile home parks for permanent residences, up to eight mobile homes per acre.

Commercial: comprised of primarily tourist-related businesses.

General forest: land use limited primarily to outdoor recreation and resource management. Some seasonal residences.

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INTRODUCTION

The extraordinarily clear waters of Lake Tahoe are being threatened. At present it is a highly oligotrophic lake, rivaled in clarity only by Crater Lake in Oregon and Lake Baikal in the Soviet Union. Land disturbances associated with development and construction activities have led to increases in erosion and surface water runoff. Sediment and nutrients carried by tributary streams impact nearshore waters and hold potential for accelerated eutrophication of Lake Tahoe.

While the great volume of water in Lake Tahoe provides substantial assimilative capacity for pollutants, the shallow nearshore areas are vulnerable to relatively small changes in the character of contributing water sources. This increases the potential for algal problems and introduction of aquatic weeds in shallow tributary delta areas.

The Environmental Monitoring Systems Laboratory, Las Vegas, was requested by the U.S. Environmental Protection Agency, Region IX, San Francisco, to research and evaluate the effectiveness of surface water treatment utilizing stream environment zones in the Lake Tahoe Basin. "Stream environment zones consist of the natural marsh and meadowlands, watercourses and drainage ways, and floodplains which provide surface water conveyance from upland areas into Lake Tahoe and its tributaries" (Tahoe Regional Planning Agency 1977).

The results of this study provide a basis for decisions which must be made in the development of an Areawide Waste Treatment Management Program for the Lake Tahoe Basin, as mandated by Section 208 of the 1972 Federal Water Pollution Control Act (PL 92-500) and its amendments by the Clean Water Act of 1977 (PL 95-217), and for other planning decisions.

Pollution of the lake and tributary streams from sewage has generally been eliminated due to local, state and federal interest in maintaining the pristine character of Lake Tahoe. Domestic sewage is collected, treated and exported from the Basin. Nonpoint sources of pollution represent the most significant remaining threat to the quality of the lake and its tributaries.

On the basis of very limited, but promising data on the modification of runoff water quality traversing meadowlands in the South Lake Tahoe area, Tahoe Regional Planning Agency (TRPA) tentatively identified natural treatment (the entrapment and immobilization of suspended materials and dissolved nutrients by natural vegetation) as a leading candidate process to be employed within the Basin in an attempt to ensure nondegradation of Lake Tahoe water quality. The concept of nondegradation, when applied to a water body such as Lake Tahoe, imposes severe restrictions upon the character of tributary and direct runoff sources to the lake. Rainfall and snowmelt runoff are generally higher in nutrients than the highly oligotrophic receiving waters of Lake Tahoe.

Karr and Schlosser (1977) suggest small storms may be responsible for carrying more than half of the annual suspended sediment load therefore, a functioning meadowland system must continue to operate during small storms to be effective. For this reason, sampling during rainfall episodes was stressed during the study.

In theory, natural meadows offer resistance to waters flowing over them, resulting in decreased velocities and increased deposition of suspended sediments. The soils of periodically inundated meadows provide large surface area for physical adsorption, and biological activity of the root zone and associated bacteria provides opportunities for active nutrient uptake.

The hypotheses that were tested during this study were:

- Natural treatment of runoff waters by meadowlands reduces nutrient and suspended sediment loads in tributaries and direct surface drainage to Lake Tahoe.

- The extent of natural treatment effectiveness is a function of the character of the system and nature of the runoff.

- Physical, chemical, and biological conditions of nearshore zones reflect the impacts of tributary contributions.

The results of this study and subsequent recommendations will represent primary inputs to Lake Tahoe Basin planning and development decisions.

CONCLUSIONS

Meadowlands effectively reduce levels of tributary-borne pollutants to Lake Tahoe when certain conditions are met.

The nature of the flow (e.g., sheet flow) across meadowlands appears to be the most important factor in determining the effectiveness of meadowland treatment.

The most dramatic nutrient and sediment reductions in the functioning meadowland systems were associated with storm episodes and effectively mitigated much of the potential impact of the high episodic loadings.

Total Kjeldahl nitrogen and organic carbon were released from the meadowlands during spring snowmelt runoff. This release is probably due to a flushing effect of the snowmelt runoff traveling over decomposing plant material in the meadowland.

Treatment effectiveness appears to be reduced by increases in the slope of the meadow system.

Extensive grazing appears to alter the filtration characteristics of meadows and reduce their treatment effectiveness when the soil surface is severely disrupted and allows increased leaching of soil nutrients.

Beaver dams have a beneficial impact on the meadowland filtration process by promoting sheet flow across associated meadows.

Street runoff during episodes can carry a 10-fold or greater level of nutrients and sediments than the streams and is potentially a major source of these constituents to Lake Tahoe.

Stations impacted by tributaries from disturbed watersheds showed higher turbidity levels (an indication of lower water quality) than those stations that were either impacted by undisturbed watersheds or which were not impacted by tributaries at all. When tributary impacted and non-impacted nearshore waters were compared, no significant differences in water quality were detected.

The high variability in nutrient removal among the meadowland systems studied suggests that determinations of treatment capacity be evaluated on a system-by-system basis.

RECOMMENDATIONS

The utility of natural and enhanced riparian habitats for treating surface runoff should be considered in future management strategies for the Lake Tahoe Basin.

With proper flow management large areas presently designated as stream environment zones can likely serve indefinitely as sinks for nutrients and sediments, without adversely impacting their functional integrity. Activities which threaten to reduce the extent (e.g., building construction) and the natural treatment capabilities (e.g., grazing, offroad vehicle traffic) of meadowlands should be discouraged.

An inventory of all major meadow and marshlands near Lake Tahoe should be conducted to assess the potential of each area for providing filtration and nutrient removal.

Conservative methods to maximize sheet flow and enhance natural filtration processes through meadows should be identified and evaluated.

For purposes of nutrient removal, as much surface runoff as technically feasible should be diverted to sheet flow across meadowlands.

Additional studies are recommended to determine overload capacities and functional longevity of meadowland treatment systems and to define the nature of treatment processes within the meadowland.

PHYSICAL GEOGRAPHY

The Tahoe Basin is located on the California-Nevada border between the Sierra Nevada and Carson Mountain Ranges (Figure 1). Roughly two-thirds of the Basin lie in California and one-third in Nevada. It extends over an area of 324,000 acres* and ranges from an elevation of 6,229 feet at the lake surface to 10,881 feet at Freel Peak. The surface area of Lake Tahoe is 122,000 acres and the surface area of the contributing watershed is 202,000 acres. It is a major recreational area for millions of people from the metropolitan areas of San Francisco, Sacramento, and Reno.

The striking topography of the Basin results from its origin in faulting. Roughly parallel fault movements on the east and west sides of the Basin resulted in the relative dropping of the Basin floor and the rising of the surrounding mountains. The depression, or graben, which resulted was filled with water to form Lake Tahoe.

The soils of the southern and eastern parts of the Basin are of granitic origin and are very susceptible to erosion. Once disturbed, vegetation is difficult to reestablish due to a short growing season (70-120 days) and sterility of the soils. The north and west shore of the lake have more stable soils derived from volcanic and metamorphic rock.

The topography of the Lake Tahoe Basin is generally quite steep; about one-half of the land has a slope steeper than 20 percent. Only about 45,000 acres of land lie at slopes of 10 percent or less; most of this land is situated at the south end of the lake.

The hydrology is a function of both climatic factors and topography. Runoff from rainfall and snowmelt is channeled directly to Lake Tahoe through 64 separate watersheds (Table 1). Refer to Appendix B for climatic data in South Lake Tahoe during the sampling period. These tributary streams are most important as they provide the link between the land and soils and the water quality of the lake.

The natural level of the outlet from the lake, at Tahoe City, California, is 6,223 feet. However, a low dam at the outlet provides regulation of the lake level for water storage. The lake surface level ranges from 6,223 to 6,229 feet, depending on the quantity of inflow and operation of the gates at the Tahoe City dam. The total quantity of water subject to regulation is about 745,000 acre-feet (all quoted figures from Wise 1975).

* These data are presented in the literature in English units; see conversion factors in Appendix A.

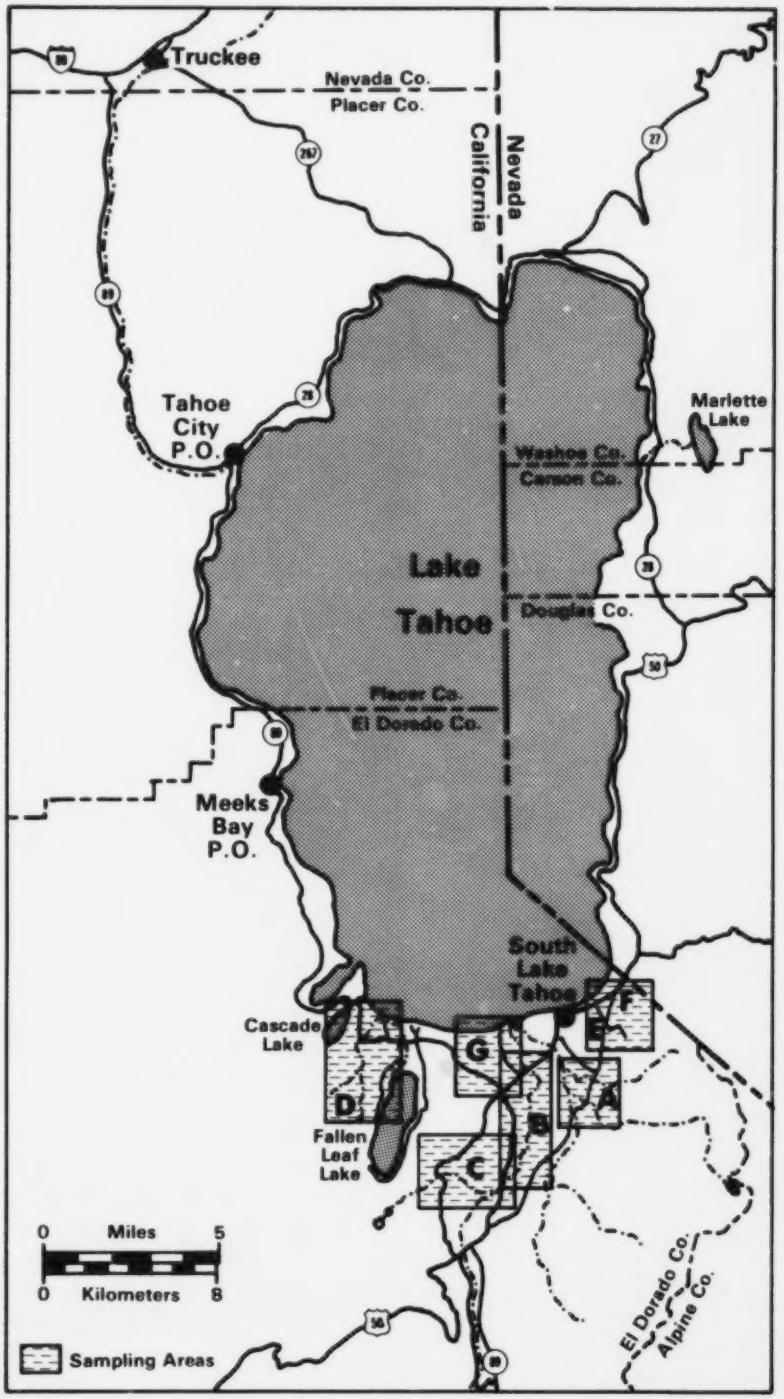

Figure 1. Lake Tahoe meadowland sampling system locations.

TABLE 1. TAHOE BASIN WATERSHEDS (TRPA 1977)

No.	Watershed Name	Area (acres)	No.	Watershed Name	Area (acres)
1	Tahoe State Park	942	36	Zephyr Creek	1,106
2	Burton Creek	3,438	37	South Zephyr Creek (included in #36)	
3	Barton Creek	570			
4	Lake Forest Creek	642	38	McFaul Creek	2,622
5	Dollar Creek	1,026	39	Burke Creek	3,317
			40	Edgewood Creek	3,494
6	Cedar Flats	1,184			
7	Watson	1,547	41	Bijou Park	2,662
8	Carnelian Bay Creek	762	42	Bijou Creek	1,872
9	Carnelian Canyon	2,586	43	Trout Creek	25,549
10	Tahoe Vista	2,624	44	Upper Truckee River	35,475
			45	Camp Richardson	2,058
11	Griff Creek	3,373			
12	Kings Beach	760	46	Taylor Creek	11,736
13	East Stateline Point	859	47	Tallac Creek	2,781
14	First Creek	1,037	48	Cascade Creek	3,075
15	Second Creek	1,115	49	Eagle Creek	5,406
			50	Bliss State Park	488
16	Burnt Cedar Creek	531			
17	Wood Creek	1,435	51	Rubicon Creek	2,158
18	Third Creek	4,024	52	Paradise Flat	637
19	Incline Creek	4,083	53	Lonely Gulch Creek	616
20	Mill Creek	1,387	54	Sierra Creek	771
			55	Meeks	5,247
21	Tunnel Creek	1,040			
22	Unnamed	597	56	General Creek	5,525
23	Sand Harbor	1,334	57	McKinney Creek	3,235
24	Marlette Creek	3,179	58	Quail Lake Creek	1,022
25	Secret Harbor Creek	2,586	59	Homewood Creek	515
			60	Madden Creek	1,552
26	Bliss Creek	618			
27	Deadman Point	654	61	Eagle Rock	459
28	Slaughter House	4,632	62	Blackwood Creek	7,328
29	Glenbrook Creek	3,309	63	Ward Creek	8,035
30	North Logan House Creek	1,053	64	Truckee River	-
31	Logan House Creek	1,542			
32	Cave Rock	1,018			
33	Lincoln Creek	1,600			
34	Skyland	483			
35	North Zephyr Creek	1,662			

MATERIALS AND METHODS

FIELD SAMPLING METHODS

Samples for nutrient, residue, chlorophyll a, turbidity, dissolved oxygen, conductivity, pH and total alkalinity analyses were collected on a regular basis at all the sampling sites, provided sufficient flow existed. Fecal coliform and organic carbon samples were obtained from inlet and outlet sites of the meadows.

Nutrient samples were collected in two 4-ounce polypropylene or polyethylene bottles and preserved with 200 µl of mercuric chloride solution (25g $HgCl_2$/liter H_2O). The 4-ounce bottles were also used for collection of organic carbon, chlorophyll a, turbidity and fecal coliform samples. A 1-quart or 1-gallon polyethylene cubitainer was filled at each site for pH, alkalinity, conductivity and residue analyses. These samples, as well as the bottles containing chlorophyll a, organic carbon, and fecal coliform samples, were stored in a cooler until necessary preservation was performed or the sample was analyzed. Samples for dissolved oxygen analysis were collected in 300-ml glass BOD bottles, immediately fixed with Hach dry-powder reagents and stored out of direct sunlight. Refer to Table 2 for a summary of sample volumes and field treatment procedures.

Air and water temperatures were recorded and mean stream depth, width and velocity were measured at each site, when feasible. Transects were taken every one to three feet (depending on stream width) across the stream bed; these values were averaged for mean depth. Velocity was determined with a Teledyne-Gurley pygmy flow-meter (data presented in Appendix B). Stakes were placed at the sampling sites to insure that measurements were taken in the same location during each sampling round. All pertinent information was recorded on field data sheets.

LABORATORY METHODS

The pH and total alkalinity determinations were made as soon as possible following return to the field laboratory at the end of each day's sampling. A Beckman Chem-mate™ portable pH meter with combination electrode was used for these determinations. Alkalinities greater than 20 mg/l ($CaCO_3$ equivalent) were analyzed according to the titrimetric procedure described in Methods for Chemical Analysis of Water and Wastes (EPA 1974). Alkalinities of less than 20 were determined by the low alkalinity procedure described in Standard Methods for the Examination of Water and Wastewater (1975).

Chlorophyll a samples were filtered at the end of each day's sampling and analyzed the following day by the fluorometric procedure described in Yentsch and Menzel (1963). A Turner 110 Fluorometer was used for this purpose.

TABLE 2. FIELD MEASUREMENT AND WATER SAMPLE ANALYSIS SUMMARY

Parameters	Sample Volume	Field Treatment	Where Performed
Physical Measurements			
Temperature			In situ
Velocity			In situ
Depth			In situ
Width			In situ
Chemical and Physical Analyses			
Specific Conductance	4-ounce	Refrigerated	Field Lab
Turbidity	4-ounce	Refrigerated	Field Lab
pH	4-ounce	Refrigerated	Field Lab
Dissolved Oxygen	300-ml	Chemical fixation	Field Lab
Chlorophyll a	4-ounce	Refrigerated	Field Lab
Total Phosphorus, Kjeldahl-N	4-ounce	Mercuric chloride added	EMSL-LV*
Dissolved ortho-Phosphorus, Ammonia-N, Nitrite-nitrate-N, Total Alkalinity	4-ounce	Filtered, Mercuric chloride added	EMSL-LV*
Residues	1-quart	Refrigerated	LRWQCB†
Fecal Coliform	4-ounce	Refrigerated	LRWQCB†
Organic Carbon	4-ounce	Refrigerated Phosphoric acid added	U. of Idaho

* EMSL-LV - Environmental Monitoring Systems Laboratory, Las Vegas

† LRWQCB - Lahontan Regional Water Quality Control Board Laboratory, by EPA staff.

Dissolved oxygen samples were titrated with phenylarsine oxide within 24 hours after collection. Turbidity measurements were made with the Monitek 21 Laboratory Nephelometer. The Model 31 Conductivity Bridge (Yellow Springs Instruments) was used for conductivity determinations. Specific conductance was calculated assuming a 2.7 percent change in conductivity per degree Celsius (Kinney, unpublished data).

Fecal coliforms were analyzed by the Membrane Filter Procedure described in Standard Methods for the Examination of Water and Wastewater (1975) with the exception that samples were incubated in a warm oven rather than a water bath. Care was taken to maintain the temperature at 44.5°C; the incubator was not opened during the incubation process.

The technique used for measuring total and filtrable residues is outlined in Standard Methods for the Examination of Water and Wastewater (1975) except that the evaporation process followed the procedure utilized by the California State Public Health Service (Dr. Gilbert Dong, personal communication). Samples were measured into 100-ml volumetric flasks; the flasks were inverted over aluminum pans; and the samples were dried on a hot plate at less than 100°C. Volatile residue analysis was performed according to the procedure in Standard Methods for the Examination of Water and Wastewater (1975) using a drying temperature of 103°C. Total non-filtrable residue using GF/C glass fiber filters was calculated by subtraction of total filtrable residue from total residue.

One of each pair of nutrient samples was filtered through a Nucleopore filter with pore size of 0.4 µm into a clean, unused polyethylene or polypropylene bottle, recapped, and with its unfiltered counterpart, forwarded to EMSL-LV for analysis. Analysis of the samples was accomplished by the methods outlined in Table 3. All of the analyses were performed utilizing adaptations of automated procedures described in Methods for Chemical Analysis of Water and Wastes (EPA 1974).

Organic carbon samples were acidified with phosphoric acid (hydrochloric acid was replaced after the first month of sampling) to below pH 2, at the end of each sampling day. Organic carbon ampules were prepared according to the procedure described in the "Oceanography International Model 0524 Purging and Sealing Unit Operating Procedures Manual." Generally, a 5-ml aliquot of sample was introduced into each ampule by pipet; a few samples had to be diluted with distilled water due to high carbon concentrations. Samples for dissolved organic carbon were filtered through Nucleopore filters with pore size of 0.4 µm. Initially, type HA Millipore filters with pore size of 0.45 µm had been used, but contamination from these filters was found to be significant. The sealed ampules were shipped to Dr. A. J. Lingg, Department of Bacteriology and Biochemistry, University of Idaho, where analyses were performed. The samples were autoclaved for 12 hours to oxidize the carbon to carbon dioxide. The amount of carbon per vial was determined by infrared analysis using the Total Carbon System (Oceanography International Corp., College Station, Texas). Instrument readings were converted to carbon amounts with a regression equation calculated from standard curves.

TABLE 3. ANALYTICAL METHODS AND PRECISION OF LABORATORY ANALYSES

Parameter	Method	Precision
Dissolved Orthophosphate	Single reagent methods involving colorimetric determination of antimony-phosphomolybdate complex.	0.005 mg/l P or ± 5%
Total Phosphorus	Persulfate oxidation followed by the above method for dissolved orthophosphate.	0.005 mg/l P or ± 5%
Total Dissolved Phosphorus	Filtration and persulfate oxidation followed by the above method for dissolved orthophosphate.	0.005 mg/l P or ± 5%
Nitrite-Nitrate-N	Cadmium reduction followed by the diazotization of sulfanilamide by nitrite coupled with N-(1-naphthyl)-ethylene diamine.	0.010 mg/l N or ± 5%
Ammonia-N	Alkaline phenol hypochlorite reaction producing indophenol blue.	0.005 mg/l N or ± 5%
Kjeldahl-N	Acid digestion followed by the above procedure for ammonia nitrogen.	0.10 mg/l N or ± 5%
Total Alkalinity	Methyl orange colorimetric.	0.5 mg/l or ± 5% as $CaCO_3$.

QUALITY CONTROL

Field Laboratory

Field calibrations of analytical instruments were performed regularly. The conductivity bridge and nephelometer were checked against standards at the beginning of each day's testing. The fluorometer used for chlorophyll *a* determinations was routinely calibrated with spinach extract from Sigma Corporation, and no significant drift was detected. The pH meter was checked against standard buffer solutions of pH 7 and pH 10.

Duplicate analyses of chlorophyll *a*, dissolved oxygen, and organic carbon were performed for each sample. Replicate measurements of pH, alkalinity, turbidity and conductivity were made at least every fifteenth sample.

Duplicate cubitainers for residue analysis were periodically collected and analyzed.

EMSL-LV Laboratory

In the Laboratory Operations Branch at EMSL-LV, instrumentation was checked daily with a set of standards. Every tenth sample was replicated and also spiked with a known amount of the constituent being analyzed. Periodically, duplicate samples were collected at a sampling station and sent through the laboratory as blind quality control samples.

MEADOWLAND SYSTEM DESCRIPTIONS

Sites were selected to characterize meadowlands or marshlands in the South Lake Tahoe area through which waters were impacted by a variety of land-use sources. The number of meadowlands and sites were limited commensurate with the logistical problems associated with episodic event coverage. Several major watersheds as well as local runoff areas (continuous versus intermittent watercourses) are encompassed by this study.

TROUT CREEK

Trout Creek watershed has a calculated mean annual runoff of 36,378 acre-feet from an area of 25,549 acres (Tahoe Regional Planning Agency 1977) as shown in Figure 2. McGaughey et al. (1971), report a range of runoff values from 9,940 to 44,840 acre-feet with an average annual runoff of 22,000 acre-feet, for the period from 1960 to 1970. The upper reaches of the watershed are zoned general forest and support some grazing activity. The creek passes through a low-density residential area just upstream from the first sampling site, A06. It then crosses Pioneer Trail, a high-volume thoroughfare, and enters a broad meadow area which is a site of grazing activity during the warm-weather periods. At this point it is in a deep channel; it remained channelized throughout the study period.

Cold Creek, a major tributary to Trout Creek, was also sampled just upstream from Pioneer Trail (site A01) and at three sites along the stretch between Pioneer Trail and the confluence with Trout Creek (a distance of approximately 0.8 kilometer). Throughout this stretch Cold Creek remained channelized.

The confluence with Trout Creek occurs within a large meadow into which water overflowed throughout winter and spring. There were two beaver dams located downstream from the confluence which backed up and diverted roughly 50 percent (this figure varied according to season) of the water through minor distributaries across the meadow. These distributaries finally rejoined the main stream channel just upstream from site A09. The flow at site A04 therefore represented only 50 percent of the total flow. Site A09, at Martin Avenue, was the most downstream sampling site. The total length of the sampled reach was approximately 1.6 kilometers with an average slope of 0.5 percent. Further downstream, Trout Creek flows through a large wetlands system and ultimately into Lake Tahoe. Sites A16 and A17 represented storm drainage entering Trout Creek from a heavily traveled highway and a residential street, respectively. These sites flowed only during episodes.

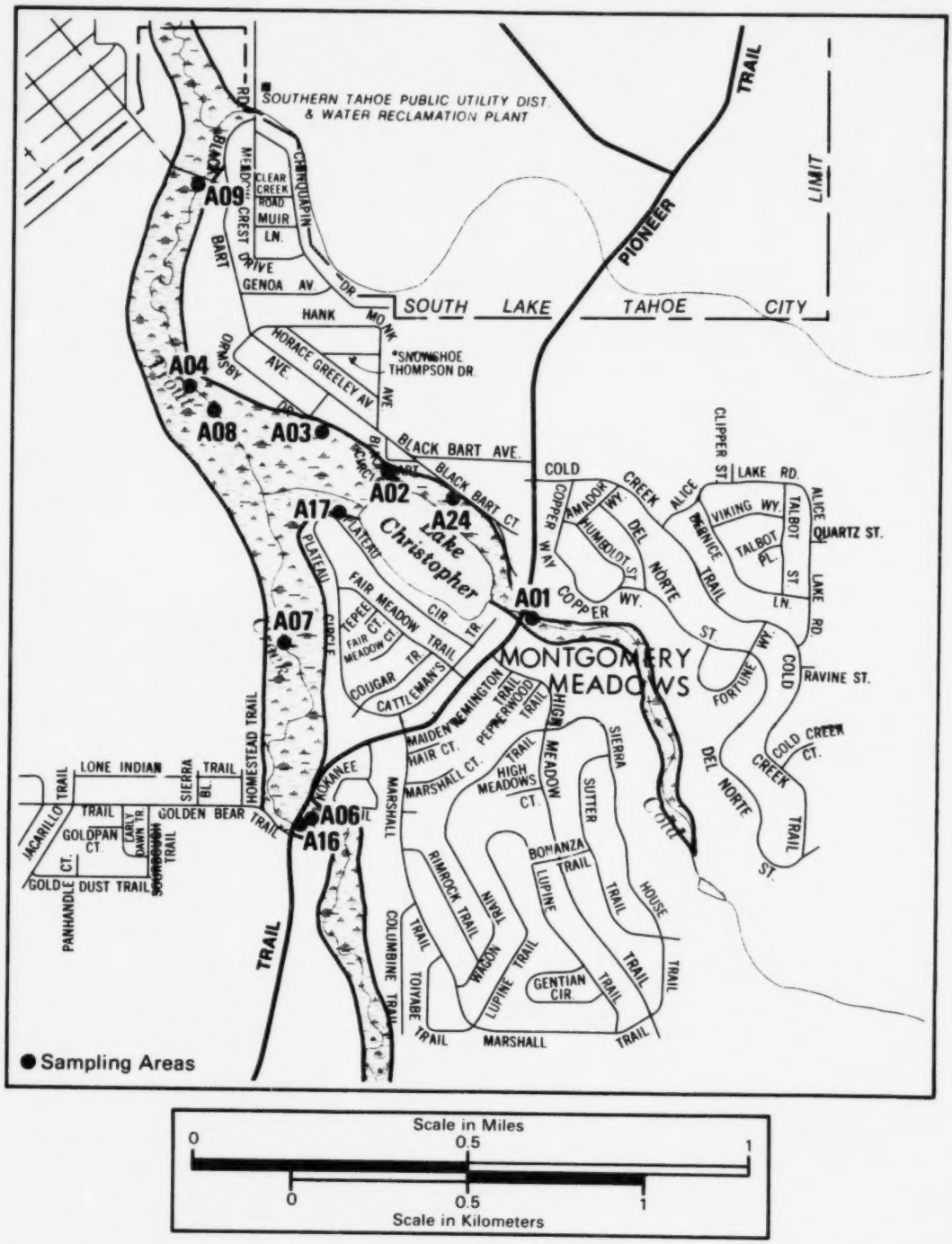

Figure 2. Trout-Cold Creek sampling-sites location map. (Basic map reproduced by permission of the California State Automobile Association, copyright owner.)

UPPER TRUCKEE RIVER

Upper Truckee River has a watershed of 35,475 acres with a mean annual runoff of 93,106 acre-feet (Tahoe Regional Planning Agency 1977) as shown in Figure 3. McGauhey et al. (1971), reported a range of runoff values from 18,980 to 75,240 acre-feet with an average annual runoff of 71,500 acre-feet for the period from 1960 to 1970. The river travels from its upper reaches in a wilderness area through low-density residential zones, through a golf course, past the airport, through a commercial area, through a large marsh near the lake-shore and ultimately into Lake Tahoe. There is a broad meadow associated with the river along its length. The water flowed out of its channel and across the meadow between the airport and Highway 50 during spring snowmelt. One station was located upstream from the meadow and a second was located downstream from the meadow to monitor the effect of the meadow on water quality. It must be noted that only a small fraction of the channelized volume of the Upper Truckee River spilled into the meadowlands, even during maximum-flow periods.

ANGORA CREEK

Angora Creek is in the Truckee River watershed. The drainage area for Angora Creek is approximately 2,816 acres with a calculated mean annual runoff of 6,040 acre-feet (Figure 4). The upper reaches of the drainage area are zoned general forest. Angora Creek drains Angora Lakes at an elevation of 7,360 feet. There are several summer homes and a small resort located on the shore of each of the two small lakes.

The creek flows through a low-density residential area and was first sampled 100 feet downstream from Lake Tahoe Boulevard (site C01). This site was moved slightly upstream March 31, 1978 to accommodate a change in the creek channel and renamed site C00. Sites C00 and C01 are considered equivalent. The creek channel runs through a broad meadow which comprised the study area, but its waters remained channelized throughout the study period.

There were four sources of low-density residential runoff which entered the system between the last (most downstream) two sampling sites. One of these sources was selected as representative of the land-use type and monitored throughout the study (site C15).

The sampling site furthest downstream was at Amacker Ranch, a distance of approximately 2.1 kilometers from the most upstream site. The study area has an average slope of 2 percent. Angora Creek enters Truckee River 0.4 kilometer downstream from Amacker Ranch.

SAWMILL ROAD DRAINAGE

The runoff area designated "Sawmill Road Drainage" is located in the Angora Creek drainage (Figure 4). It consists of a broad meadow, bisected by Lake Tahoe Boulevard, and receives runoff for about two months during spring snowmelt. The study area has an average slope of 3 percent.

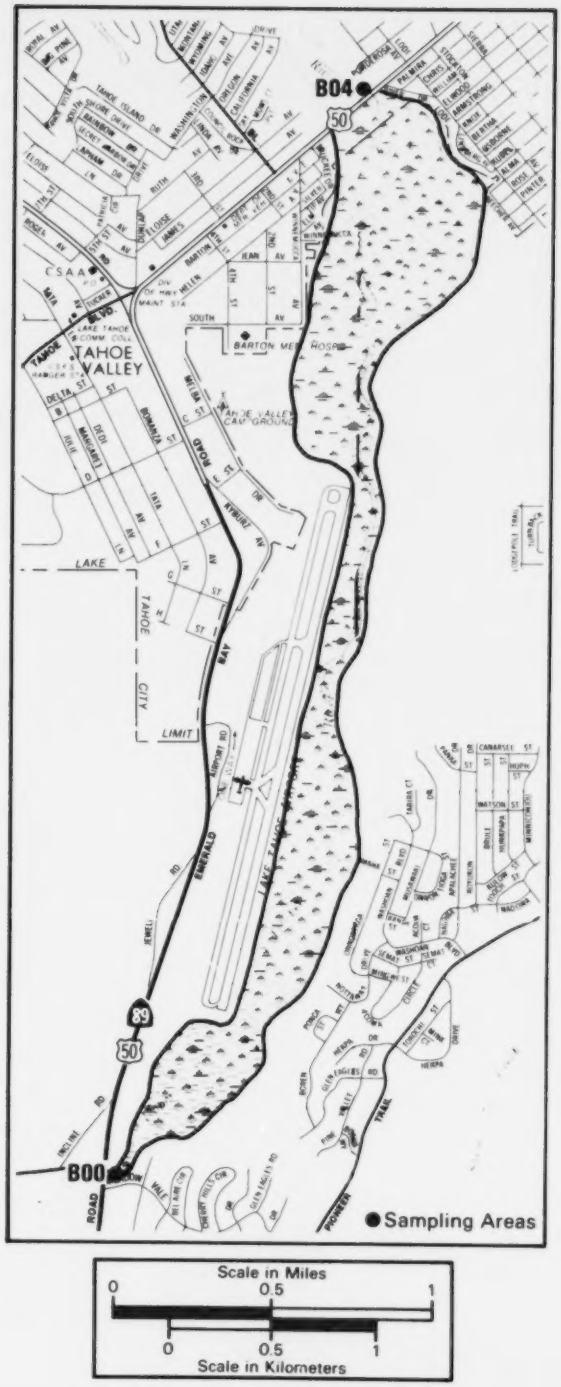

Figure 3. Upper Truckee River sampling-sites location map. (Basic map reproduced by permission of the California State Automobile Association, copyright owner.)

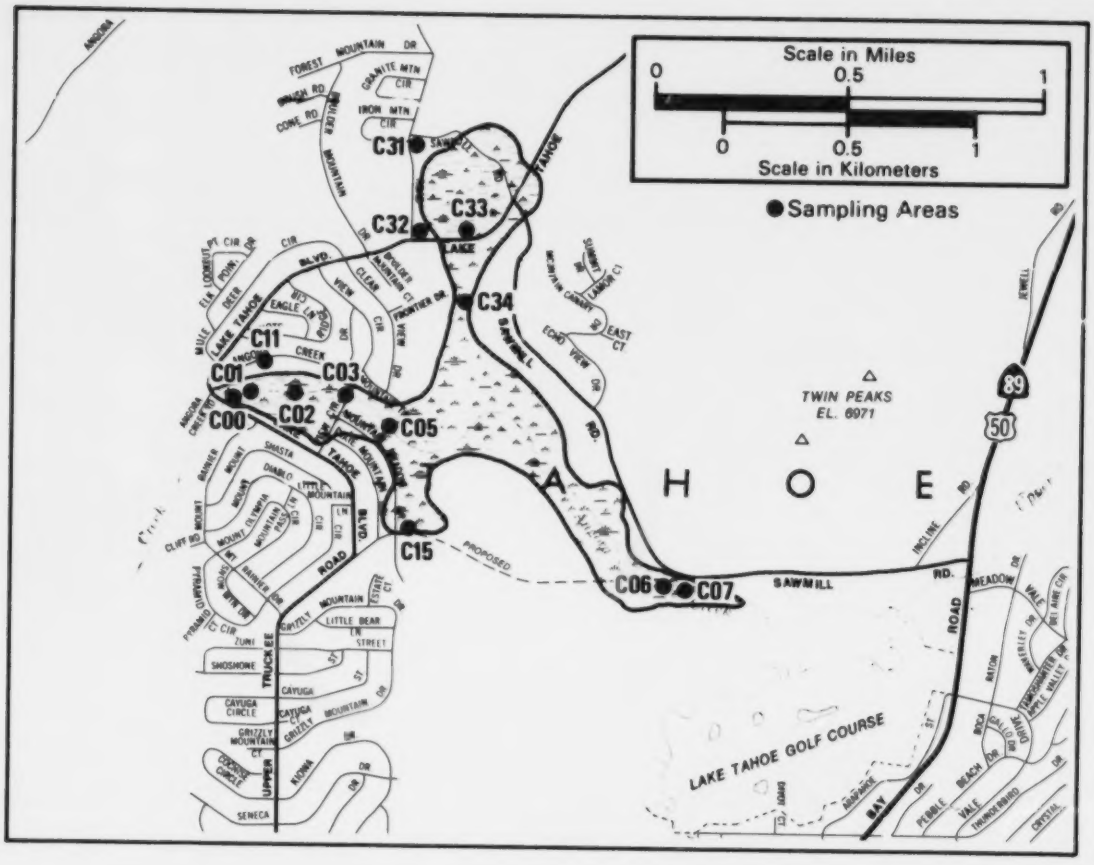

Figure 4. Angora Creek and Sawmill Road Drainage sampling-site location map. (Basic map reproduced by permission of the California State Automobile Association, copyright owner.)

The flow travels through a low-density residential zone before entering the meadow, where it disperses into sheet flow for approximately 411 meters. It then enters a channel, crosses under Lake Tahoe Boulevard, and enters the second half of the meadow. The water again spreads over the meadow and remains as sheet flow for an additional 183 meters before becoming channelized. The flow enters Angora Creek approximately 0.6 kilometer further downstream.

TALLAC CREEK

Tallac Creek watershed has a calculated mean annual runoff of 6,200 acre-feet from an area of 2,781 acres (Tahoe Regional Planning Agency 1977). McGauhey et al. (1971), reported a mean annual runoff of 5,400 acre-feet. The upper reaches of the watershed are in a wilderness area, zoned general forest (Figure 5).

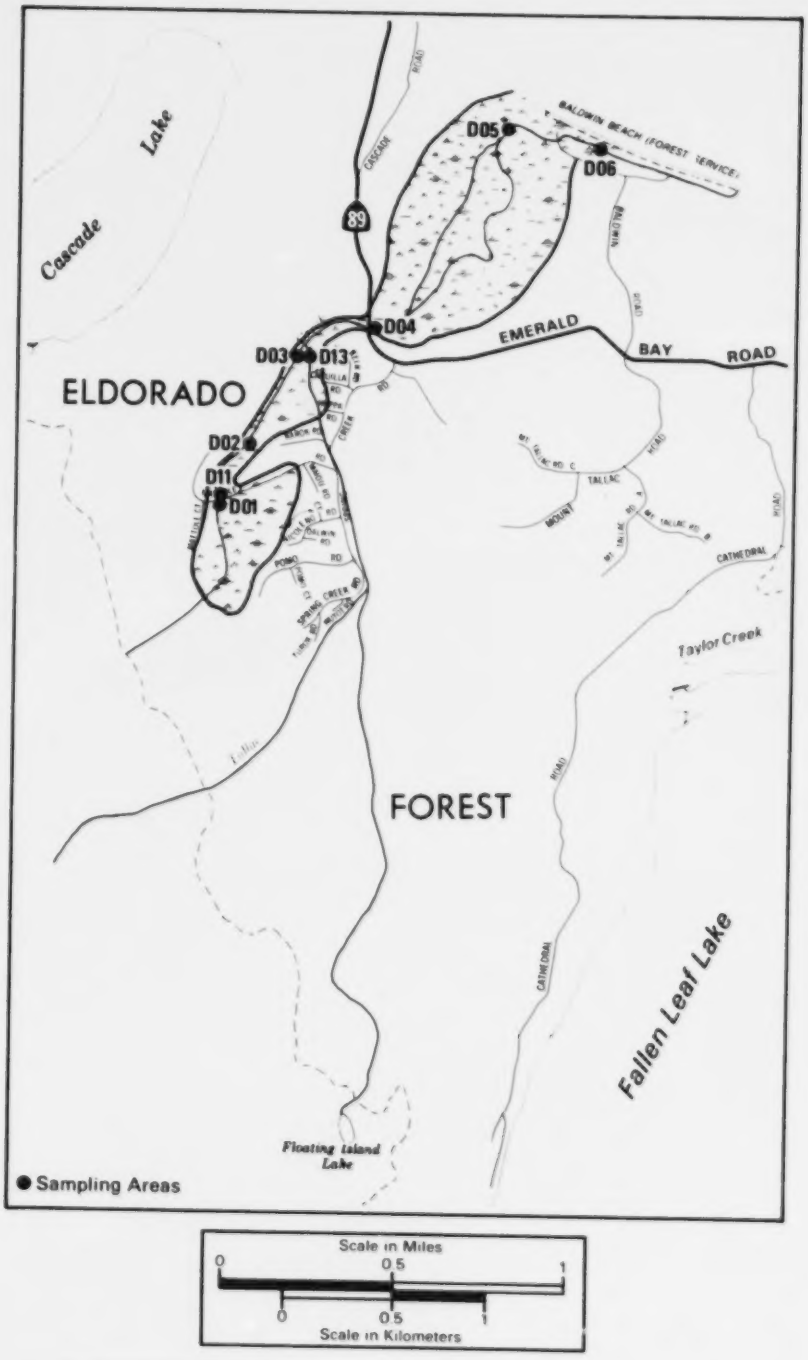

Figure 5. Tallac Creek sampling-site location map. (Basic map reproduced by permission of the California State Automobile Association, copyright owner.)

The creek ramifies through a broad meadow and coalesces just upstream from the first sampling site. The channel then traverses an area of summer-use homes. It passes through a second meadow into which it was not observed to overflow during the period of study. Downstream from this meadow, the flow converges with the larger east fork of Tallac Creek. The east fork was dry during the Fall of 1977.

The flow then passes beneath Highway 89 and enters an extensive meadow. This meadow was used as pasture for horses during snow-free periods of the year. The creek divides into several minor distributaries and travels as sheet flow across the meadow. The distributaries then coalesce just upstream from the point at which Tallac Creek enters Lake Tahoe. The total length of the sampled reach is 2.4 kilometers with an average slope of 2 percent.

BLACKWOOD ROAD DRAINAGE

The study area designated as "Blackwood Road Drainage" occupies the western section of Bijou Park Watershed, which drains a portion of the Heavenly Valley ski area and its associated parking facilities (Figure 6). Runoff is collected in drop inlets and travels in a culvert to a natural drainageway which begins approximately 30.5 meters downstream from the intersection of Saddle Road and Wildwood Avenue. Serious erosion problems have caused deterioration of the natural drainageway.

A culvert carries the water beneath Ski Run Boulevard and empties into a small forested area about 305 meters long. The water then passes beneath Pioneer Trail, a high-volume thoroughfare, and is dispersed into a meadow area in sheet flow for approximately 1,000 feet (305 meters). Channelized flow is reestablished behind several apartment complexes on Blackwood Avenue and travels in a culvert beneath a parking lot and Tamarack Avenue. The sampled reach from Ski Run Boulevard to Tamarack Avenue has an average slope of 2 percent. After emerging from the culvert the water forms a small pool and then proceeds in a 1-foot-deep channel that meanders through another meadow, crosses beneath Werner Salas Drive in a low-density residential area, and merges with runoff from the vicinity of Bijou Elementary School.

The drainage water enters yet another meadow area through which the flow is channelized, then passes through a pipe beneath Shirley Avenue and empties into a cement lined ditch where it mixes with urban runoff. The water then travels in culverts through the downtown commercial zone before entering Lake Tahoe at Ski Run Marina. The length of the sampled reach was approximately 2.4 kilometers.

The upper portion of the drainage at Wildwood Avenue is considered by the City of South Lake Tahoe Public Works to pose one of the most serious threats to runoff water quality in the South Lake Tahoe area (Bob Deyerberg, Public Works Inspector, personal communication).

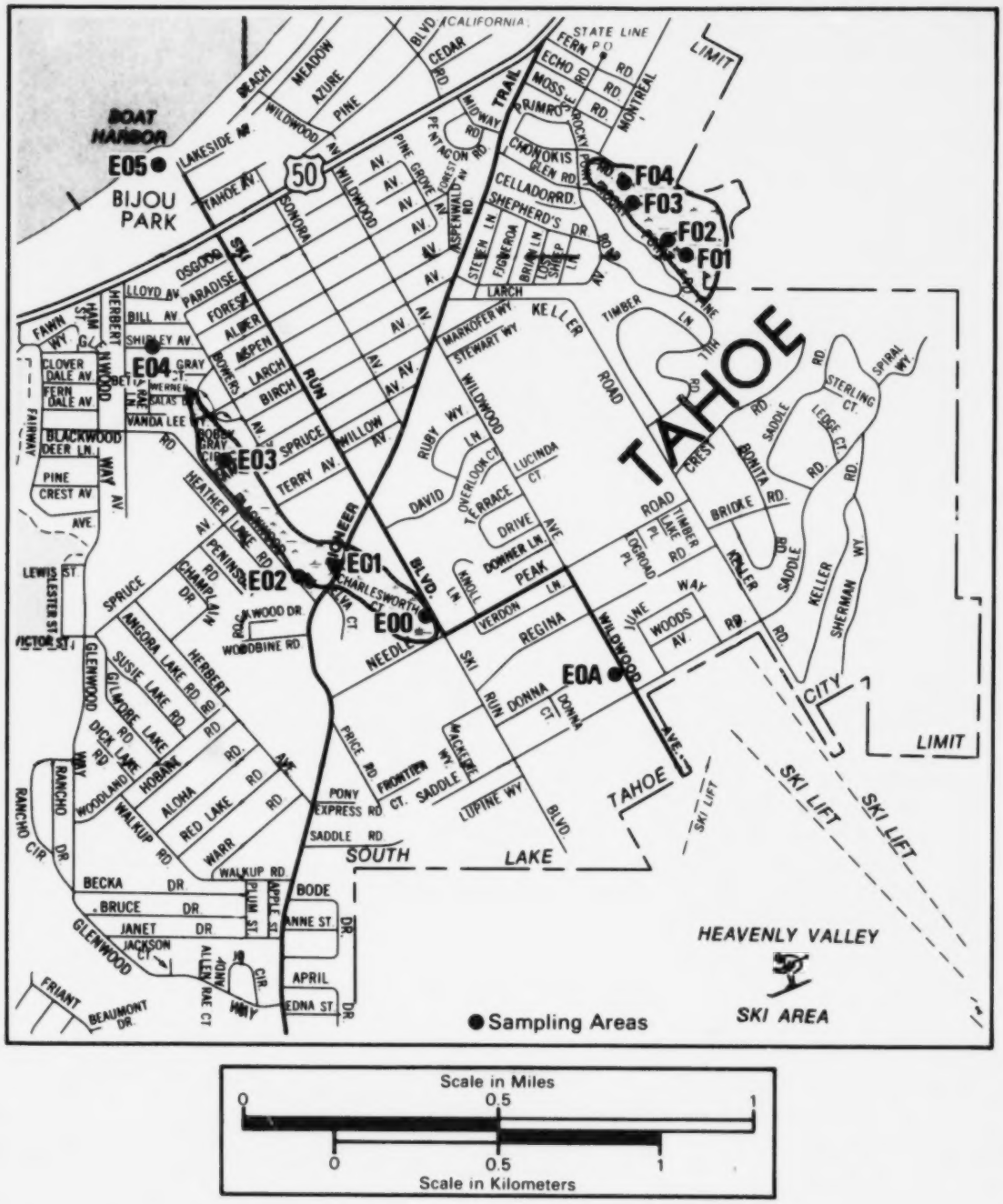

Figure 6. Blackwood Road Drainage and Chonokis-Glen Road Drainage sampling-sites location map. (Basic map reproduced by permission of the California State Automobile Association, copyright owner.)

CHONOKIS-GLEN ROAD DRAINAGE

The study area designated "Chonokis-Glen Road Drainage" begins in a partially developed eastern portion of the Bijou Park Watershed (Figure 6). Collecting runoff in the vicinity of Crest Road, flow descends from a steep slope running parallel to Glen Road, a medium-density residential zone of the Stateline area of South Lake Tahoe. Upstream from Chonokis Road the flow disperses into sheet flow and traverses a small meadow for approximately 1,000 feet (305 meters) with an average slope of 7 percent. The water recollects into several shallow (8-15 cm deep) grass-lined channels which wind their way in and about a high-density residential zone and collects in a culvert that crosses Pioneer Trail. This drainage area flowed about 1.5 months during the spring snowmelt.

TALLAC LAGOON DRAINAGE

The study area designated as "Tallac Lagoon Drainage" is a small portion of the Upper Truckee River Watershed (Figure 7). The drainage is influenced by general commercial and medium- and high-density residential zones of the city of South Lake Tahoe, in the vicinity of the intersection of U.S. Highways 50 and 89 (locally designated as the "South Y"). Flow travels in cement and natural-substrate channels and leads to a small meadow at the southernmost tip of Tallac Lagoon.

The lagoon lies along the southern perimeter of the Tahoe Keys residential development and has a surface area of approximately 26 acres. During spring snowmelt, increased water levels caused lagoon waters to flow into the Pope Beach portion of the Truckee Marsh and out to Lake Tahoe, via a channel at the western perimeter of Tahoe keys. The marsh-water level is controlled by a rock barrier at the Lake's edge. Tallac Lagoon was included in the meadowland study at the request of the U.S. Forest Service and was sampled from April 1978 through August 1978.

LAKE TAHOE NEARSHORE LAKE SAMPLING

Lake sampling was initiated in July 1978 to determine the impact of tributary contributions on nearshore waters and the potential for accelerated eutrophication in these affected nearshore areas. Study areas selected were those that received runoff from Tallac Creek, Upper Truckee River and the Blackwood Road drainage (Figure 8). Two control areas that were not impacted by a nearby tributary were selected on the eastern and western shores of Lake Tahoe, to establish baseline levels of nearshore water quality.

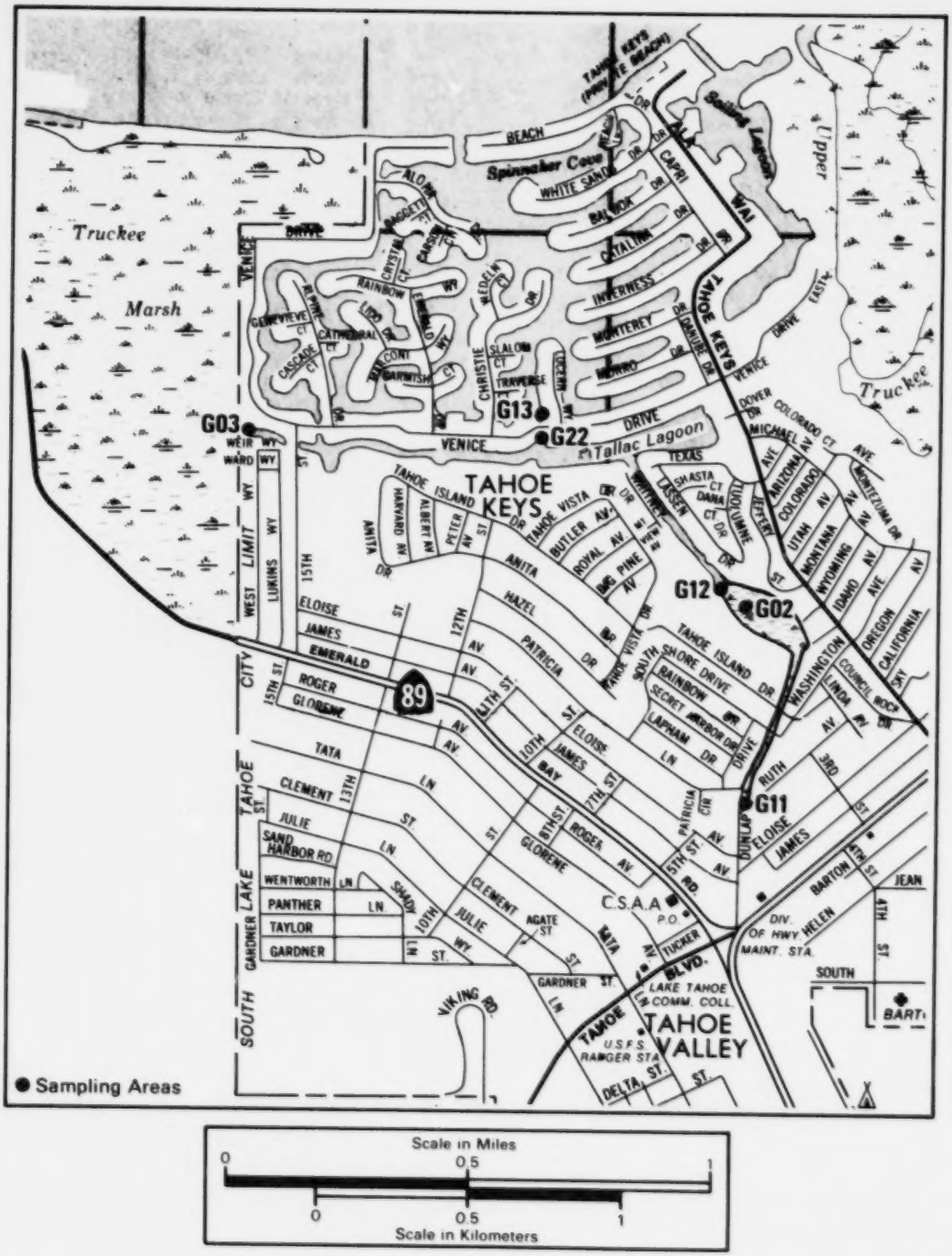

Figure 7. Tallac Lagoon Drainage sampling-sites location map. (Basic map reproduced by permission of the California State Automobile Association, copyright owner.)

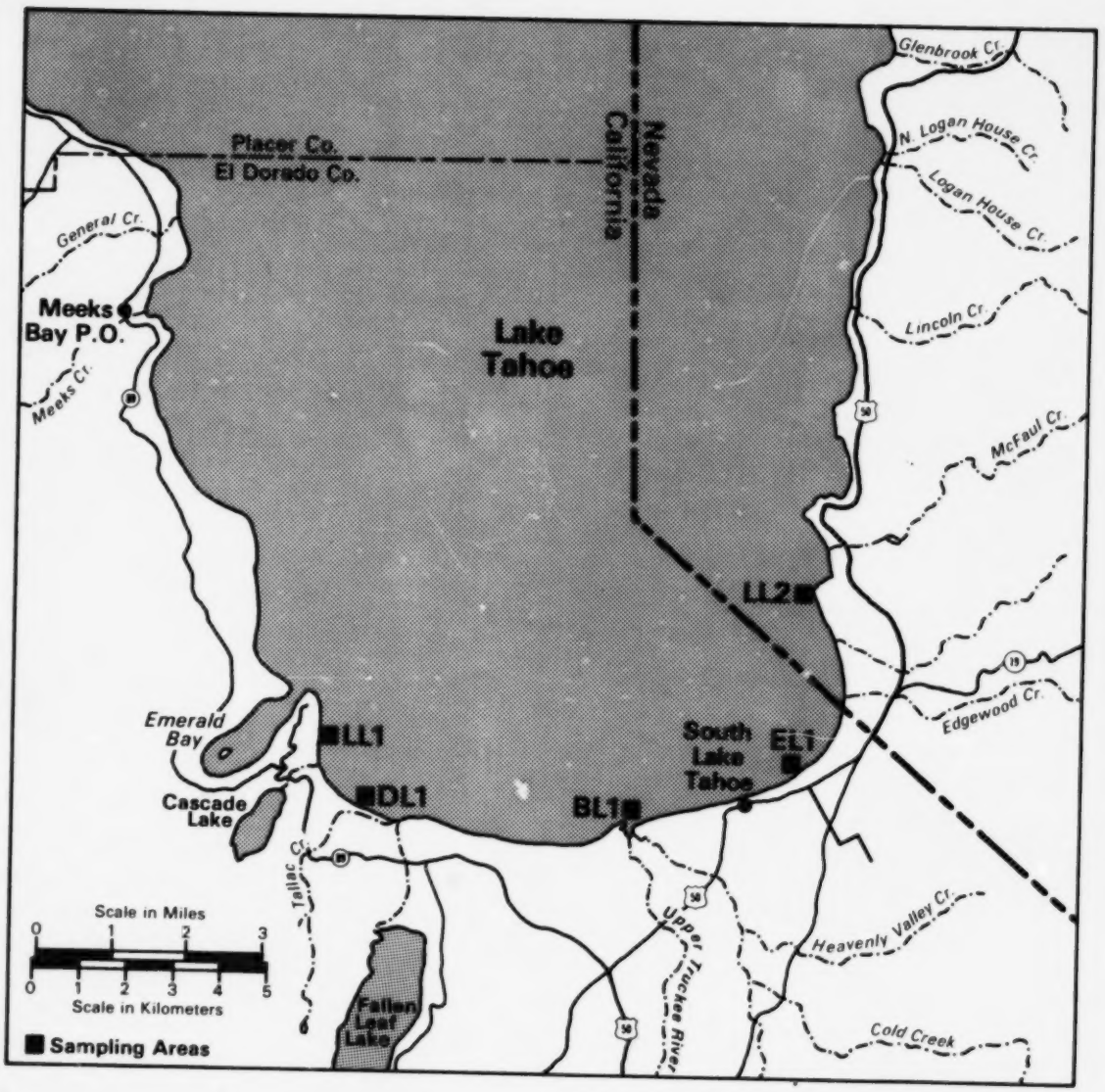

Figure 8. Lake Tahoe nearshore sampling-sites location map.

RESULTS

Parameter measurements discussed in the Materials and Methods chapter of this report which are not discussed any further (i.e., pH, alkalinity, dissolved oxygen, dissolved phosphorus, chlorophyll a, and fecal coliform) are available in raw data format from the authors.

TROUT CREEK

The Trout-Cold Creek meadowland system (Figure 2) was divided into two sections for purposes of analysis. The upper 0.8 km portion of the sampled reach of both Trout and Cold Creeks remained channelized throughout the study period (between sites A02 to A03 and A06 to A07); the sampled reach below the confluence of the two creeks (sites A04 to A09) was impacted by beaver dams which caused about 50 percent of the water (this percentage varied seasonally) to leave the channel boundaries and flow across the meadowland in sheet flow. This overland flow reentered the channel before the final sampling site (A09).

Generally there were increased concentrations of both nutrients and sediments between the inlet and outlet stations of the upper channelized portion of the system (Table 4). Substantial reductions in concentrations occurred in that portion of the system which exhibited sheet flow.

> *As a result of extremely low levels of nitrogen in the Lake Tahoe Basin, many observations were below the detection limits of the analyses (20 µg/l for NH_3-N and NO_2+NO_3-N; 200 µg/l for KJEL-N). For these "K" values (i.e., values known to be less than detection limits) two sets of calculations were performed; one based on the lower limit of detection and the other based on 1 µg/l for NH_3-N and NO_2+NO_3-N, and 20 µg/l for KJEL-N (value presented in parentheses), the lowest values found in historical literature on Lake Tahoe tributaries. The range between the resulting values should contain the mean value for the respective parameters.*

Cold Creek, from site A01 to A03, is a dirt-lined, artificial channel created when Lake Christopher was formed. Natural vegetation is well established along the channel banks, with no evidence of gross contributions from erosion. Because a large net increase in nutrients occurred between sites A01 and A02, site A02 was chosen as a more representative inlet site to the system.

During the winter, total phosphorus (PTOT), turbidity, total residue (TOTRES) and total nonfiltrable residue (TNFILT) were reduced (Table 4).

TABLE 4. TROUT-COLD CREEK: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE*

Parameters	Site A02	Site A03	R/O**	Average Percent Change	Site A06	Site A07	R/O**	Average Percent Change	Site A04	Site A09	R/O**	Average Percent Change
PTOT (µg/l)												
Fall	33	29	6/7	-12	27	25	2/6	-7	46	37	6/7	-20
Winter	44	28	7/10	-36	30	34	3/11	13	36	35	7/12	-3
Spring	60	63	1/8	5	54	55	1/7	2	51	47	7/9	-8
Summer	42	41	3/5	-2	33	33	1/5	0	37	37	2/5	0
Episodes	--	--	--	--	19	22	0/1	16	234	62	2/2	-74
NH_3-N												
Fall	20(11)	30(25)	0/7	50(127)	20(5)	20(12)	1/7	0(140)	60	30(19)	6/7	-50(-68)
Winter	20(13)	30(17)	2/10	50(31)	20(4)	30(12)	0/11	50(200)	30(19)	23(10)	2/12	-33(-47)
Spring	20(3)	20(6)	0/8	0(100)	20(1)	20(4)	0/7	0(300)	20(1)	20(5)	0/9	0(400)
Summer	40(28)	30(26)	2/5	-25(-7)	30(22)	30	1/5	0(36)	20(16)	30(22)	0/5	50(38)
Episodes	--	--	--	--	30	20	0/1	-33	20	30	1/2	50
NO_2+NO_3-N (µg/l)												
Fall	760	920	1/7	21	20(1)	20(12)	0/7	0(1100)	200	40	6/7	-80
Winter	200	250	1/10	25	30(27)	40(28)	1/11	33(4)	190	60	12/12	-68
Spring	70	80	2/8	14	20(4)	20(4)	0/7	0(0)	40(39)	30(17)	7/9	-25(-56)
Summer	40	50	0/5	25	20(1)	20(1)	0/5	0(0)	30(22)	30(18)	0/5	0(-18)
Episodes	--	--	--	--	30	30	0/1	0	60	40	2/2	-33
KJEL-N (µg/l)												
Fall	200(70)	200(40)	0/7	0(-43)	200(60)	200(130)	0/7	0(117)	200(110)	200(140)	0/7	0(27)
Winter	300(110)	300(120)	2/10	0(9)	200(50)	200(50)	0/11	0(0)	200(60)	200(50)	0/12	0(-17)
Spring	300(230)	500(430)	0/8	67(87)	300(190)	300(180)	0/7	0(-5)	300(230)	200(140)	2/9	-33(-39)
Summer	300	300(260)	2/5	0(13)	300(240)	400(360)	0/5	33(50)	300(230)	300(250)	0/5	0(9)
Episodes	--	--	--	--	200(20)	200(20)	0/1	0(0)	500(410)	300	1/2	-40(-27)
Turbidity (NTU)												
Fall	1.1	1.0	3/5	-9	0.5	0.5	2/5	0	1.7	1.4	2/5	-18
Winter	32.8	3.9	6/11	-88	2.6	3.2	1/11	23	2.6	2.8	6/12	8
Spring	5.7	5.6	4/8	-2	5.1	5.6	1/7	10	5.1	5.0	5/9	-2
Summer	2.1	2.3	1/5	10	1.0	1.1	0/5	10	2.0	2.2	1/5	10
Episodes	--	--	--	--	2.0	3.4	0/1	70	113.8	36.8	2/2	-68
TOTRES (mg/l)												
Fall	85	86	3/6	1	60	59	3/5	-2	67	57	2/3	-15
Winter	96	76	4/9	-21	65	78	4/10	20	71	62	9/11	-13
Spring	59	68	2/8	15	57	56	4/8	-2	59	54	6/9	-8
Summer	43	45	1/2	5	43	43	1/3	0	44	43	2/3	-2
Episodes	--	--	--	--	58	65	0/1	12	782	53	2/2	-93
TNFILT (mg/l)												
Fall	7	12	0/5	71	14	13	2/3	-7	--	--	--	--
Winter	56	11	3/5	-80	8	10	4/7	25	9	8	1/4	-11
Spring	16	24	1/8	50	14	16	3/7	14	18	16	4/7	-11
Summer	9	9	0/1	0	4	3	1/3	-25	4	4	2/3	0
Episodes	--	--	--	--	--	--	--	--	732	7	2/2	-99
SPCOND (µmhos)												
Fall	68	75	0/3	10	--	--	--	--	76	72	3/3	-5
Winter	75	76	5/11	1	--	--	--	--	73	65	10/11	-11
Spring	38	38	3/8	0	--	--	--	--	34	33	4/9	-3
Summer	31	32	1/5	3	--	--	--	--	34	34	1/3	0
Episodes	--	--	--	--	--	--	--	--	38	41	1/2	8

* For explanation of parentheses refer to note on page 24.
** Reductions observed/total number of paired observations.

These apparently high mean reductions were due in large part to one observation on March 8, 1978. Construction activity to install a drainage pipe immediately below site A01 exposed a large amount of loose soil to erosion. Cold Creek was impacted by considerable silt loads (TNFILT up to 200 mg/l) for approximately 1 month. With the exception of slight reductions in turbidity and PTOT, net increases in nutrients and sediments between the inlet and outlet stations were observed during all seasons except winter.

Nitrite and nitrate-nitrogen (NO_2+NO_3-N) increased in concentration between the inlet and outlet stations in the channelized portion during all seasons (Table 4). Exceptionally high levels (2,000 µg/l) were evident in the fall when the sampling program was initiated.

Water quality trends in Trout Creek, from Pioneer Trail to just before the confluence of Cold and Trout Creeks (site A06 to A07), followed the same trends as other channelized flows, i.e., a net increase of dissolved and particulate matter from inlet to outlet. Referring to Table 4, we note no substantial decreases occurring in this segment of the stream during most seasons. Some minor reductions occurred during low-flow periods of the fall for PTOT, TOTRES, and TNFILT.

Site A04, located below two beaver dams, was utilized to represent inlet concentrations to the meadow system that extends to site A09. The beaver dams divert approximately 50 percent of the total flow into this meadow; the other portion is restricted to channelized flow. Because only half of the total volume of water is effectively being diverted over the meadowland, reductions noted in Table 4 are conservative.

Seasonal trends show fair to excellent reductions in all constituents except ammonia-nitrogen (NH_3-N) (Table 4). The greatest reductions were noted during fall and winter, when beaver dams were intact and a greater proportion of water was flowing into the meadow. Inordinately high NO_2+NO_3-N levels were substantially reduced by the time the flow reached the outlet station (Table 4). During May it was noticed that a portion of the larger beaver dam was removed, possibly to allow for fish migration to upstream spawning sites.

Of primary interest are episodic data from Table 4. The percent changes exhibited during storms provide evidence of the capacity of meadowlands to absorb large nutrient and sediment loads. These reductions often represent a return of concentrations to normal, nonepisodic levels. Only NH_3-N and specific conductance showed increases between inlet and outlet stations during episodes. Table 5 indicates the magnitude of concentrations contributed by street runoff in the Trout-Cold Creek vicinity. These values represent 10-fold increases over normal concentrations of nutrients and residues. Outlet concentrations after pooling and meadowland treatment show that these stream environment zones act as nutrient and sediment sinks.

TABLE 5. TROUT CREEK VICINITY STREET RUNOFF: MEAN EPISODIC CONCENTRATIONS

Parameter	Site A16*	Site A17**
PTOT (µg/l)	333	548
NH_3-N (µg/l)	437	299
NO_2+NO_3-N (µg/l)	566	290
KJEL-N (µg/l)	1,800	1,433
SPCOND (µmhos)	92	48
TOTRES (mg/l)	622	217
TNFILT (mg/l)	527	158
TURB (NTU)	340.7	84.6
TOC (mg/l)	30.3	12.9
DOC (mg/l)	10.5	5.7
POC (mg/l)	19.8	7.2

* A16: Representative of street runoff from Pioneer Trail, a high volume thoroughfare. (n=6)

** A17: Representative of low density housing area street runoff from Montgomery Estates. (n=8)

UPPER TRUCKEE RIVER

Of the 64 sub-basins in the Lake Tahoe Basin, the Upper Truckee River (Figure 3) contributes 23 percent of the annual runoff to the Lake. This system was picked up late in the study period (June 1978) to determine if the large meadow associated with it was responsible for any filtering action. Only during the peak snowmelt period was there sufficient water to overflow the high stream banks. Even at that time, only a small fraction of the volume of water in the river escaped the channel.

Total kjeldahl-nitrogen (KJEL-N) and NH_3-N were the only constituents to be substantially reduced between the inlet and outlet stations (Table 6). A slight reduction in particulate organic carbon (POC) was noted. All other parameter values showed increases, although NO_2+NO_3-N remained below the level of detection (20 µg/l) during all observations.

TABLE 6. UPPER TRUCKEE RIVER: MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE*

Parameters	Site B00	Site B04	R/0**	Average Percent Change
PTOT (µg/l)	25	30	1/4	20
NH_3-N (µg/l)	28(18)	20(1)	1/4	-28(-94)
NO_2+NO_3-N (µg/l)	20(1)	20(1)	--	--
KJEL-N (µg/l)	380(280)	280(180)	2/4	-36
Turbidity (NTU)	1.5	2.3	0/4	53
TOC (mg/l)	2.5	3.2	1/4	28
POC (mg/l)	0.6	0.5	1/2	-17
TOTRES (mg/l)	36	38	0/3	6
TNFILT (mg/l)	3	6	1/3	100
SPCOND (µmhos)	26	26	1/4	0

* For explanation of parentheses refer to note on page 24.
** Reductions observed/total number of paired observations

ANGORA CREEK

Substantial contributions of surface water runoff entered the Angora Creek meadowland system (Figure 4) between the sampled inlet and outlet (sites C01 and C06, respectively). The flow doubled and nutrient loadings increased up to four times through the meadow.

A reduction in POC was noted during the spring and summer; TNFILT were reduced in the winter and summer; turbidity was reduced slightly in the fall (Table 7). All other constituents exhibited mean seasonal increases or no change in concentration between the inlet and outlet stations.

Nutrient and sediment concentrations were greatly increased at the inlet during episodes except POC; however, under these circumstances, there were reductions between the inlet and outlet stations in all parameters but KJEL-N and specific conductance (SPCOND) (Table 7). Decreases in turbidity, TNFILT, and NO_2+NO_3-N were dramatic [66%, 54%, and 56% (maximum value), respectively]. Since the contributing runoff entering the system between the inlet and outlet stations carried even higher concentrations of nutrients and sediments than the inlet, the filtering efficiency of the meadowland was greater than the apparent mean reduction values. Only during these episodic events was the water volume sufficient to exceed the channel boundaries and spread across the meadow in sheet flow.

SAWMILL ROAD DRAINAGE SYSTEM

The Sawmill Road Drainage system (Figure 4) is comprised entirely of snowmelt runoff from a small isolated area; it flowed for a very short period from March 1978 through early May 1978. Constituent concentrations from sites C31 and C32 were combined to form a weighted mean calculated from flow data, representing the input to the meadowland system.

The NH_3-N, NO_2+NO_3-N, and KJEL-N concentrations at the inlet to the meadowland system were usually below the detection limits of the analyses. Table 8 shows that in the upper meadow, between sites C31/C32 and C33, turbidity and TNFILT were reduced.

The lower meadow (site C33 to C34) showed very slight reductions in TFILT and specific conductance. Turbidity, PTOT, NH_3-N, KJEL-N, and TNFILT increased downstream. These increased concentrations were contributed by additional inputs along the system draining areas of high erosion.

TALLAC CREEK

The upper reach of the Tallac Creek meadowland system, from site D01 to D03 (Figure 5), flowed the entire year. The downstream reach from site D04 to the point at which it enters the Lake (site D05) did not flow continuously until March 1978. The main fork of Tallac Creek (site D13) was dry until December 1978. It enters the system just downstream from site D03. Water temperature ranged from 0.2°C in January 1978 to 19.7°C in June 1978.

The system is divided into two portions for ease of analysis: the upper channelized reach from D01 to D03; and the lower section, from site D04 to D05, which traverses the meadowland in sheet flow.

TABLE 7. ANGORA CREEK: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE*

Parameters	Site C00/C01**	Site C06	R/0†	Average Percent Change
PTOT (µg/l)				
Fall	28	33	4/7	18
Winter	19	30	3/11	58
Spring	18	25	1/9	39
Summer	24	31	1/5	29
Episodes	98	93	4/10	-5
NH_3-N (µg/l)				
Fall	20(13)	30(19)	1/7	50(46)
Winter	20(11)	30(23)	0/11	50(109)
Spring	20(1)	20(3)	0/9	0(200)
Summer	20(13)	30(28)	0/5	50(115)
Episodes	50(45)	40	6/9	-20(-18)
NO_2NO_3-N (µg/l)				
Fall	20(4)	20(8)	0/7	0(100)
Winter	30(16)	30(24)	1/11	0(50)
Spring	20(1)	20(1)	0/9	0
Summer	20(1)	20(1)	0/5	0
Episodes	140(134)	70(59)	5/10	-50(-56)
KJEL-N (µg/l)				
Fall	200(20)	200(190)	0/7	0(850)
Winter	200(50)	200(180)	0/11	0(260)
Spring	200(110)	300(200)	1/9	50(82)
Summer	300(250)	400(350)	1/5	33(40)
Episodes	500(440)	600(520)	2/10	20(18)
Turbidity (NTU)				
Fall	1.6	1.4	4/5	-12
Winter	2.4	2.7	5/11	12
Spring	0.5	1.0	0/9	100
Summer	0.4	1.9	0/5	375
Episodes	37.1	12.4	8/10	-66
TOC (mg/l)				
Winter	4.8	5.6	1/8	17
Spring	4.1	4.6	1/9	12
Summer	2.9	2.9	3/5	0
Episodes	5.1	4.3	3/6	-16

(continued)

TABLE 7. (Continued)

Parameters	Site C00/C01**	Site C06	R/O†	Average Percent Change
POC (µg/l)				
Winter	1.7	2.1	1/6	24
Spring	1.2	1.1	3/8	-8
Summer	1.0	0.7	1/2	-30
Episodes	1.1	1.0	2/4	-9
TOTRES (mg/l)				
Fall	56	70	0/5	25
Winter	50	69	0/10	38
Spring	31	40	0/8	29
Summer	28	44	0/2	57
Episodes	104	80	4/10	-23
TNFILT (mg/l)				
Fall	8	12	1/2	50
Winter	6	4	5/7	-33
Spring	3	4	1/8	33
Summer	3	2	2/4	-33
Episodes	77	35	5/8	-54
SPCOND (µmhos)				
Fall	53	83	0/3	57
Winter	38	64	0/11	68
Spring	25	26	1/9	4
Summer	21	39	0/5	86
Episodes	38	49	1/10	29

* For explanation of parentheses refer to note on page 24.
** Sites C00 and C01 are equivalent sites (see text for explanation).
† Reductions observed/total number of paired observations.

Between sites D01 and D03 surface water runoff, and more importantly, groundwater contributions from numerous springs increased the annual flow by 88 percent. Since these additional inputs to the system were not monitored, interpretation of the filtering efficiency of this channelized portion of the meadowland is not possible. Reductions observed are at least partially the result of dilution.

TABLE 8. SAWMILL ROAD DRAINAGE: MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE*

Parameters	Upper Meadow				Lower Meadow			
	Site C31/C32**	Site C33	R/O†	Average Percent Change	Site C33	Site C34	R/O†	Average Percent Change
PTOT (µg/l)	32	33	2/5	3	33	37	1/5	12
NH_3-N (µg/l)	20(1)	20(1)	0/5	0	20(1)	26(15)	0/5	30(1400)
NO_2+NO_3-N (µg/l)	20(1)	20(1)	0/5	0	20(1)	20(1)	0/5	0
KJEL-N (µg/l)	200(60)	260(190)	0/5	30(217)	260(190)	280	1/5	8(47)
Turbidity (NTU)	2.2	0.7	5/5	-68	0.7	2.0	0/5	186
SPCOND (µmhos)	71	74	1/5	4	74	61	4/5	-18
TOTRES (mg/l)	72	68	3/5	-6	68	67	3/5	-1
TNFILT (mg/l)	5	1	3/5	-80	1	3	0/5	200
TFILT (mg/l)	73	69	2/5	-5	69	65	4/5	-6

* For explanation of parentheses see note on page
** C31/C32 - Weighted mean based on flow.
† Reductions observed/total number of paired observations.

Although the water traveled in sheet flow across the meadowland between sites D04 and D05, large net increases in nutrient and sediment concentrations were observed with the notable exception of NO_2+NO_3-N which showed substantial reductions for the year (Table 9). Regardless of how high NO_2+NO -N became during non-episodic flows, the system always brought the NO_2+NO_3-N back to a level approximating the lower detection limits of our analytical procedure (20 µg/l).

This meadowland was used for grazing during the snow-free period of the year. The animals caused extensive disruption of the ground surface and exposed a larger soil surface to leaching of nutrients by the water passing over it.

BLACKWOOD ROAD DRAINAGE

The Blackwood Road drainage system (Figure 6) was dry until a rainstorm that occurred on December 14, 1977. From that date, flows gradually increased and reached a maximum during snowmelt in the latter part of June. Flows then decreased through the summer and ceased entirely in August. Water temperature ranged from a minimum of 1°C in February to a maximum of 19°C in July. This system reacted dramatically to rainstorms with large elevations in sediment and nutrient concentrations.

Sampling sites E00 and E03 are used as the inlet and outlet sites, respectively, in the analysis of this system. The portion of the system encompassed by these sites contains two meadowlands through which water travels in sheet flow. Downstream from site E03 the channel passes through a dense commercial area and enters the Lake at Tahoe Marina (site E05). Water quality at sites E03 and E05 are examined to determine the contributions of urban runoff.

PTOT was effectively reduced (Table 10) within the system. During baseline flows one observation showed a very slight increase (from 60 µg/l to 61 µg/l) - while the remaining observations showed reductions in PTOT ranging from 22 percent to 74 percent. High levels of PTOT (95 to 1,410 µg/l) entered the meadowland between sites E00 and E03 from a storm drain collecting runoff from a mobile home park (site E02). The effectiveness of nutrient reduction in the meadowlands is, therefore, greater than the mean reduction values of the system would suggest.

NH -N was also reduced by this system (Table 11). The highest NH_3-N concentrations occurred in the summer months. In the spring, regardless of how high the NH_3-N concentration was at the inlet (up to 70 µg/l), it was reduced to $\leq$ 20 µg/l. Any filtering effects of the meadow during episodes were masked by the large contributions from the storm drainage of the mobile home park (site E02). The runoff from the mobile home park had NH_3-N concentrations up to 1,410 µg/l. The mean percent increase for the system during episodes, is 21 percent because of the additional inputs.

TABLE 9. TALLAC CREEK: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE*

Parameters	Site D01	Site D03	R/O**	Average Percent Change	D04	D05	R/O**	Average Percent Change
PTOT (µg/l)								
Fall	19	22	2/5	16	--	--	--	--
Winter	30	27	5/11	-10	22	81	0/2	268
Spring	20	21	2/8	5	17	21	1/7	24
Summer	28	29	2/5	4	27	39	0/5	44
Episodes	74	163	2/4	120	434	409	1/1	-6
NH_3-N (µg/l)								
Fall	20(1)	20(1)	0/5	0	--	--	--	--
Winter	30(15)	20(12)	2/11	-33(-20)	20(1)	30	0/2	50(2900)
Spring	20(6)	20(6)	0/8	0	20(1)	20(1)	0/7	0
Summer	20(14)	30(26)	0/5	50(86)	20(16)	30(28)	0/5	50(75)
Episodes	30(11)	20(17)	4/4	-33(54)	50	410	0/1	720
NO_2+NO_3-N (µg/l)								
Fall	50(33)	30(15)	1/5	-40(-54)	--	--	--	--
Winter	200	120(119)	8/10	-40(-40)	100	20(11)	2/2	-80(-88)
Spring	120	60	6/8	-50	50(49)	20(9)	5/7	-60(-82)
Summer	30	30(22)	2/5	0(-27)	20(11)	20(1)	1/5	0(-91)
Episodes	260	170	4/4	-35	360	330	1/1	-8
KJEL-N (µg/l)								
Fall	200(150)	200(80)	1/5	0(-47)	--	--	--	--
Winter	400(370)	400(310)	4/11	0(-16)	200(110)	400	0/2	100(264)
Spring	300	300(210)	2/8	0(-36)	200(130)	300(180)	0/7	50(38)
Summer	300	280	1/5	-7	300(150)	400	0/5	33(167)
Episodes	800	1,500	1/4	88	3,400	3,700	0/1	8
Turbidity (NTU)								
Fall	0.4	0.4	2/5	0	--	--	--	--
Winter	0.6	0.7	3/10	17	0.5	1.0	0/2	100
Spring	0.4	0.6	0/8	50	0.4	0.6	1/7	50
Summer	0.5	0.5	1/5	0	0.3	1.6	0/5	433
Episodes	2.7	12.5	1/4	363	42.0	62.0	0/1	48
TOC (mg/l)								
Spring	4.0	4.4	1/3	10	2.9	4.5	0/2	55
Summer	1.8	2.6	0/1	44	1.4	2.9	0/1	107
Episodes	5.6	7.3	1/3	30	16.5	17.3	0/1	5
POC (mg/l)								
Spring	1.3	1.4	1/2	8	--	--	--	--
Episodes	1.8	2.2	1/3	22	11.9	11.0	1/1	-8
TOTRES (mg/l)								
Fall	76	74	4/5	-3	--	--	--	--
Winter	93	81	10/10	-13	61	92	0/2	51
Spring	55	47	6/8	-15	32	39	1/7	22
Summer	57	70	1/2	23	38	42	0/2	10
Episodes	92	119	1/4	29	278	295	0/1	6
TNFILT (mg/l)								
Fall	16	2	1/4	-88	--	--	--	--
Winter	5	4	7/11	-20	4	31	0/2	675
Spring	2	3	3/8	50	3	6	1/6	100
Summer	1	2	0/2	100	5	2	1/1	-60
Episodes	112	72	2/3	-36	205	219	0/1	7
SPCOND (µmhos)								
Fall	100	96	3/3	-4	--	--	--	--
Winter	91	84	10/10	-8	47	56	0/2	19
Spring	45	36	9/10	-20	22	27	1/7	23
Summer	70	60	5/5	-14	34	37	1/5	9
Episodes	57	51	4/4	-10	70	79	0/1	13

* For explanation of parentheses refer to note on page 24.
** Reductions observed/total number of paired observations.

TABLE 10. BLACKWOOD ROAD DRAINAGE: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE OF TOTAL PHOSPHORUS (PTOT) IN µg/l

Season	Site E00	Site E03	R/O*	Average Percent Change
Winter	145	49	3/3	-66
Spring	71	50	5/6	-30
Summer	102			
Episodes	1,920	126	1/1	-93

* Reductions observed/total number of paired observations

TABLE 11. BLACKWOOD ROAD DRAINAGE: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE OF AMMONIA-NITROGEN (NH_3-N) IN µg/l*

Season	Site E00	Site E03	R/O**	Average Percent Change
Winter	50	40(30)	2/3	-20(-40)
Spring	60	20(4)	6/6	-67(-93)
Summer	90			
Episodes	240	290	1/2	21

* For explanation of parentheses refer to note on page 24.
** Reductions observed/total number of paired observations

Nitrite and nitrate-nitrogen (NO_2+NO_3-N) was reduced considerably by the meadowland system (Table 12). The highest concentrations of NO_2+NO_3-N occurred in the spring, and coincided with the most efficient reductions (100 percent). The limited data for rainstorms showed one reduction of 78 percent and one increase of 33 percent.

KJEL-N was reduced by the meadowland in the winter but increased within the meadowland during the spring (Table 13). The KJEL-N concentrations accompanying rainstorms reached up to 10,400 µg/l at the inlet site to the system. The mean reduction in KJEL-N during rainstorms was 76 percent. These data show the meadowland was more efficient when filtering higher concentrations of KJEL-N.

TABLE 12. BLACKWOOD ROAD DRAINAGE: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE OF NITRITE AND NITRATE-NITROGEN (NO_2+NO_3-N) IN µg/l*

Season	Site E00	Site E03	R/O**	Average Percent Change
Winter	240	23(11)	3/3	-90(-95)
Spring	460	20(1)	6/6	-96(-100)
Summer	290			
Episodes	320	360	1/2	13

* For explanation of parentheses refer to note on page 24.
** Reductions observed/total number of paired observations

TABLE 13. BLACKWOOD ROAD DRAINAGE: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE OF KJELDAHL-NITROGEN (KJEL-N) IN µg/l*

Season	Site E00	Site E03	R/O**	Average Percent Change
Winter	400	200	3/3	-50
Spring	280(250)	450	0/6	61(80)
Summer	630			
Episodes	6,600	1,600	2/2	-76

* For explanation of parentheses refer to note on page 24.
** Reductions observed/total number of paired observations

The meadowlands exhibited an impressive capability to reduce the level of turbidity regardless of the initial concentration (Table 14). When rainstorms caused the turbidity to soar as high as 4,110 NTU, the meadowlands continued to reduce levels by about 90 percent.

Specific conductance was reduced during normal flows but increased during rainstorms (Table 15).

TABLE 14. BLACKWOOD ROAD DRAINAGE: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE OF TURBIDITY IN NTU

Season	Site E00	Site E03	R/0*	Average Percent Change
Winter	49	4	3/3	-92
Spring	19	2	6/6	-89
Summer	38			
Episodes	2,605	184	2/2	-93

* Reductions observed/total number of paired observations

TABLE 15. BLACKWOOD ROAD DRAINAGE: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE OF SPECIFIC CONDUCTANCE IN µMHOS

Season	Site E00	Site E03	R/0*	Average Percent Change
Winter	208	140	2/3	-33
Spring	196	186	5/6	-5
Summer	204			
Episodes	92	112	0/2	22

* Reductions observed/total number of paired observations

The total organic carbon (TOC) concentration was reduced in the winter but increased in the spring across the meadowland (Table 16). The most efficient reduction was observed in the POC with a mean reduction of 85 percent in the winter. The dissolved organic carbon (DOC) and POC concentrations at site E00 were elevated approximately 2-fold and 20-fold respectively during episodes; the data generally show more efficient marshland treatment during these events.

TOTRES was usually reduced by the meadow during normal flows (Table 17). The two episodic measurements showed exceptional reductions of 89 percent and 91 percent. These episodic concentrations reached up to 4,168 mg/l. The meadowland was most efficient at reducing the TOTRES at these elevated levels.

TABLE 16. BLACKWOOD ROAD DRAINAGE: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE OF ORGANIC CARBON IN mg/l

Parameter/ Season	Site E00	Site E03	R/O*	Average Percent Change
TOC				
Winter	9.0	5.8	2/2	-36
Spring	4.9	6.5	0/5	33
Summer	5.0			
Episodes	27.2	11.0	2/2	-60
DOC				
Winter	5.1	5.2	1/2	2
Spring	4.3	5.3	0/3	23
Summer	4.1			
Episodes	8.0	7.2	2/2	-10
POC				
Winter	4.0	0.6	2/2	-85
Spring	0.6	1.2	0/4	100
Summer	0.9			
Episodes	19.2	9.7	2/2	-49

* Reductions observed/total number of paired observations

TABLE 17. BLACKWOOD ROAD DRAINAGE: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE OF TOTAL RESIDUE (TOTRES) IN mg/l

Season	Site E00	Site E03	R/O*	Average Percent Change
Winter	253	120	2/2	-53
Spring	141	137	5/6	-3
Summer	143			
Episodes	3,060	308	2/2	-90

* Reductions observed/total number of paired observations

This meadowland was very efficient at removing TNFILT from the water (Table 18). Reductions ranged from 70 percent to 97 percent with the greatest reductions occurring in the winter, during the period of highest suspended sediment concentration. Even the high levels occurring during episodes (mean of 2,978 mg/l) were dramatically reduced within the meadowland.

TABLE 18. BLACKWOOD ROAD DRAINAGE: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE OF TOTAL NONFILTRABLE RESIDUE (TNFILT) IN mg/l

Season	Site E00	Site E03	R/O*	Average Percent Change
Winter	98	6	2/2	-94
Spring	11	3	2/2	-73
Summer	15			
Episodes	2,978	216	2/2	-93

* Reductions observed/total number of paired observations

Downstream from site E03 the channel passes through a dense commercial area and enters the Lake at Tahoe Marina (site E05). Generally, between sites E03 and E05 the water quality degrades; nutrients, sediments, and organic carbon levels are elevated (Table 19).

CHONOKIS-GLEN ROAD DRAINAGE

The Chonokis-Glen Road Drainage system (Figure 6) began flowing during a rainstorm on March 21, 1978 and went dry early in May 1978. This is a small meadowland which exhibited sheet flow. The inlet site was too shallow to accommodate the flow meter. No flow measurements were made.

The inlet concentrations of NH_3-N, NO_2+NO_3-N, and KJEL-N were usually below the lower limits of analytical detection (Table 20). Organic carbon, suspended solids and specific conductance were reduced within the meadowland. Increases in PTOT, KJEL-N, and turbidity were noted.

TALLAC LAGOON DRAINAGE

Tallac Lagoon (Figure 7), located south of Tahoe Keys residential development, is under consideration by the City of South Lake Tahoe as a stabilization lagoon for urban and commercial area runoff. This system was included in the Meadowland Treatment Study late in the sampling period in an

TABLE 19. BLACKWOOD ROAD DRAINAGE: SEASONAL MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE FROM STATION E03 TO E05*

Parameters	Site E03	Site E05	R/O**	Average Percent Change
PTOT (µg/l)				
Winter	44	93	0/5	111
Spring	47	56	1/5	19
Episodes	769	774	1/3	1
NH_3-N (µg/l)				
Winter	30	60	1/5	100
Spring	20(5)	40	0/5	100(700)
Episodes	360	500	0/3	39
NO_2+NO_3-N (µg/l)				
Winter	30(20)	50(40)	0/5	67(100)
Spring	20(1)	20(5)	0/5	0(400)
Episodes	520	810	1/3	56
KJEL-N (µg/l)				
Winter	200	500	0/5	150
Spring	400	400	1/5	0
Episodes	1,700	2,000	0/3	18
Turbidity (NTU)				
Winter	3.5	6.7	1/5	91
Spring	1.4	2.9	0/5	107
Episodes	255.0	370.0	1/3	45
TOC (mg/l)				
Winter	5.5	8.4	0/4	53
Spring	6.3	7.1	1/3	13
Episodes	6.8	7.6	0/1	12
POC (mg/l)				
Winter	0.9	2.8	1/4	211
Spring	1.3	2.1	1/3	62
Episodes	2.0	3.8	0/1	90
SPCOND (µmhos)				
Winter	146	165	1/5	13
Spring	177	185	0/5	5
Episodes	99	93	1/3	-6
TOTRES (mg/l)				
Winter	118	176	1/4	49
Spring	134	139	0/5	4
Episodes	344	292	1/2	-15
TNFILT (mg/l)				
Winter	5	16	0/2	220
Spring	3	2	2/2	-33
Episodes	255	205	1/2	-20

* For explanation of parentheses refer to note on page 24.
** Reductions observed/total number of paired observations

TABLE 20. CHONOKIS-GLEN ROAD DRAINAGE: MEAN CONCENTRATION AND AVERAGE PERCENT CHANGE*

Parameters	Site F01	Site F03	R/O**	Average Percent Change
PTOT (µg/l)				
Baseline	33	58	0/4	76
Episodes	34	82	0/2	141
NH_3-N (µg/l)				
Baseline	20(11)	20(6)	0/4	0(-45)
Episodes	25	30	0/2	20
NO_2+NO_3-N (µg/l)				
Baseline	20(1)	20(1)	0/4	0
Episodes	20(1)	20(1)	0/2	0
KJEL-N (µg/l)				
Baseline	200(110)	220(180)	0/4	10(64)
Episodes	250(160)	250	0/2	0(56)
Turbidity (NTU)				
Baseline	1.4	8.5	0/4	507
Episodes	3.6	6.1	0/2	69
TOC (mg/l)				
Baseline	6.1	5.9	3/3	-3
Episodes	6.4	6.7	0/2	5
POC (mg/l)				
Baseline	1.8	1.4	2/3	-22
Episodes	1.6	1.6	1/2	0
TOTRES (mg/l)				
Baseline	112	117	0/3	4
Episodes	113	97	1/1	-14
TNFILT (mg/l)				
Baseline	6	5	3/3	-17
SPCOND (µmhos)				
Baseline	118	113	4/4	-4
Episodes	109	98	2/2	-10

* For explanation of parentheses refer to note on page 24.
** Reductions observed/total number of paired observations

effort to provide information to the U.S. Forest Service regarding treatment capabilities of the lagoon and methods of conveyance. Sampling sites were located to monitor concentrations, before and after natural stream conveyance to the lagoon and at the end of the Tallac Lagoon.

Results from very limited sampling reveal that combined treatment of runoff waters by vegetation-lined conveyance and ponding can provide respectable reductions of PTOT, NH_3-N, NO_2+NO_3-N, KJEL-N, and turbidity. TOTRES, and SPCOND show slight increases (Table 21).

LAKE TAHOE NEARSHORE LAKE SAMPLING

Five nearshore lake stations were selected late in the study period to evaluate impacts of tributary contributions on Lake Tahoe. Two stations (LL1 and LL2) were located to represent areas not directly impacted by tributary inputs and three stations (DL1, BL1, and EL1) represented areas offshore from the inputs of Tallac Creek, Upper Truckee River, and Blackwood Drainage, respectively (Figure 8).

TABLE 21. TALLAC LAGOON DRAINAGE: MEAN CONCENTRATIONS AND AVERAGE PERCENT CHANGE*

Parameters	Site G11	Site G02	Site G03	Average Percent Change G11-G02	Average Percent Change G02-G03	Average Percent Change G11-G03	n
PTOT (µg/l)	104	89	61	-14	-31	-41	3
NH_3-N (µg/l)	35(30)	22(8)	20(1)	-36(-73)	-11(-88)	-43(-97)	4
NO_2+NO_3-N (µg/l)	47(34)	20(1)	20(1)	-57(-97)	0(0)	-57(-97)	3
KJEL-N (µg/l)	533	600	433	13	-28	-19	3
SPCOND (µmhos)	97	126	133	30	6	38	3
Turbidity (NTU)	9.2	6.7	4.0	-27	-40	-56	3
TOC (mg/l)	6.4	6.1	6.2	-5	2	-3	1
TOTRES (mg/l)	97	100	101	3	1	4	3

* For explanation of parentheses refer to note on page 24.

Nearshore sampling during the summer yielded highly variable data within and between stations. There are no apparent differences between tributary-impacted and unimpacted lake stations (Table 22). Within tributary-impacted stations, however, differences between disturbed and undisturbed watersheds were observed.

Utilizing chlorophyll a as an indicator of phytoplankton biomass, it is noted that the sites impacted by Upper Truckee River (BL1) and Blackwood Road Drainage (EL1) which are impacted by urban influences, had mean chlorophyll a concentrations of 0.9 and 0.8 µg/l, respectively. One control station (LL1) had a mean chlorophyll a concentration of 0.8 µg/l but its proximity to the "highly productive" Emerald Bay (Goldman 1974) could account for its high variability. Phytoplankton biomass was lowest at control station LL2, on the east shore, which had a mean chlorophyll a concentration of 0.4 µg/l. Within the three "impacted" lake stations, Tallac Creek, with its relatively undisturbed watershed, had a mean chlorophyll a concentration of 0.4 µg/l, comparable to unimpacted lake station LL2.

TABLE 22. NEARSHORE LAKE SAMPLING: MEAN CONCENTRATIONS, SUMMER 1978*

Parameters	Stations: Tributary Unimpacted LL1	n†	LL2	n	Tributary Impacted, Undisturbed DL1	n†	Disturbed BL1	n†	EL1	n†
PTOT (µg/l)	24	5	20	4	24	5	28	5	28	5
NH_3-N (µg/l)	30(20)	5	30(20)	4	30(27)	5	30	5	30(22)	5
NO_2+NO_3-N (µg/l)	20(6)	5	20(1)	4	20(11)	5	20(6)	5	20(6)	5
KJEL-N (µg/l)	300(243)	5	200(90)	4	300(188)	4	400(230)	5	200(80)	5
CHL *a* (µg/l)	0.8	4	0.4	4	0.4	4	0.9	4	0.8	4
SPCOND (µmhos)	94	5	96	3	96	5	79	5	92	5
ALKALINITY (mg/l)	48	5	44	4	47	5	39	5	45	5
TURBIDITY (NTU)	0.32	5	0.27	3	0.28	5	1.28	5	1.38	5
TOTRES (mg/l)	64	2	65	1	63	1	49	2	62	2
TFILT (mg/l)	68	2	66	1	68	1	46	2	61	2
TNFILT (mg/l)	0	2	0	1	--		3	2	2	2
TOC (µg/l)	1,700	5	2,000	4	2,000	5	1,900	4	2,000	4
DOC (µg/l)	2,000	5	2,600	4	1,800	5	2,000	4	1,900	4
POC (µg/l)	300	3	200	3	400	2	400	2	400	2
DO (mg/l)	8.0	5	7.9	4	7.7	5	7.8	5	7.6	5
pH	7.6	5	7.7	3	7.6	5	7.5	5	7.8	5
TOTAL DEPTH (ft)	12.0	5	10.0	2	10.0	4	2.2	5	4.0	5
H_2O TEMP (°C)	16.6	5	17.6	4	16.2	5	17.2	5	18.5	5

* For explanation of values in parentheses see note, page 24.
† n is the number of observations.

DISCUSSION

While stream and drainage areas in this study had associated meadowlands, only Blackwood Road Drainage, Chonokis-Glen Road Drainage, Sawmill Road Drainage, and portions of Trout Creek and Tallac Creek had a significant portion of their water flowing across meadowlands as sheet flow. Sheet flow, as opposed to channelized flow, appears to be the most important factor in determining the effectiveness of meadowland treatment. This is consistent with the theory that meadowlands function to increase resistance to waters flowing over them, which decreases velocities and increases deposition of suspended sediments. Since nearly all phosphorus (>85 percent) and most nitrogen (>70 percent) in surface runoff is attached to sediments, removal of the suspended solids results in removal of these nutrients from the water (Karr and Schlosser 1977). Adsorption to clays and other substances can also contribute to organic carbon losses (Bott 1976).

The reduction in nutrients can be credited both to sedimentation and to the interaction of the soil-water complex. The oxidized layer of submerged soils in the meadowland acts as a chemical trap for most nutrients including phosphorus, iron, and silicon. The oxidized and reduced layers together cause a loss of nitrogen in its usable forms (Darnell 1976). Harms (1977) suggests that in the case of orthophosphorus, the rate of sorption by the sediments decreases with decreasing concentration in the overlying water.

Of the systems that exhibited sheet flow, only Blackwood Road Drainage and to a lesser extent Trout Creek (station A04 to A09) demonstrated efficient meadowland treatment. Angora Creek showed reduced concentrations of nutrients and sediments only during episodes, when the flow was sufficient to escape the channel boundaries and flow into surrounding meadows.

Generally the efficiency of the meadowland treatment was greatest when the concentrations of the nutrients and sediments were highest; this was primarily during rainstorm events. Filtration effectiveness in the functioning meadowlands increased during high flows for sediments, PTOT, KJEL-N, turbidity, and organic carbon.

In contrast with the findings of Spangler et al. (1976), no pulse of phosphorus from the meadowlands was observed during spring runoff; however, large amounts of KJEL-N and organic carbon were released from the Blackwood Road meadowland and Sawmill Road Drainage meadowland at that time. This release was probably due to a flushing effect of the snowmelt runoff traveling over decomposing plant material in the meadowlands.

Tallac Creek from station D04 to D05 exhibited sheet flow but did not effectively reduce most nutrients and sediments. In this case, the factor which seemed to interfere with the filtering process was extensive grazing.

The ground surface over which the water traveled was severely disrupted by the animals. This exposed more soil to leaching of nutrients and, along with the direct contribution of animal wastes, was most likely the cause of the net increase in nutrients and sediments between the inlet and outlet of this meadowland. The anomaly in this system was the reduction of NO_2+NO_3-N up to 83 percent. As studies have shown Lake Tahoe to be nitrogen limited (Goldman 1974), this reduction in NO_2+NO_3-N is of great importance.

It is significant to note that all meadowlands with sheet flow that had measurable amounts of NO_2+NO_3-N, exhibited impressive reductions of this constituent. The filtering efficiency dropped off dramatically during the high flows accompanying rainstorms. As NO_2+NO_3-N is a dissolved fraction and is not readily adsorbed to the soil surface (Alexander 1961) a biological mechanism for reduction is suggested.

The dramatic increase in TNFILT (675 percent) between sites D04 and D05 on Tallac Creek during the winter suggests a flushing of the system occurred with the initiation of flow after a dry period. A similar phenomenon would be expected between sites C31/C32 and C33 on the Sawmill Road Drainage when flow commenced in spring, however, reductions or very slight increases were observed in the particulate constituents suggesting filtering by the sheet flow across the meadowland.

The Chonokis-Glen Road meadowland area is approximately the same length (305 m) and has similar vegetation to the very efficient upper meadow (station E00 to E01) of the Blackwood Road Drainage system. The only obvious difference between the meadows is their slope (7 percent versus 4 percent, respectively). The distinct differences in treatment effectiveness noted may in fact be a function of this slope difference (i.e., more nearly level meadowlands may be more effective for treatment, all other factors being equal). The data support a premise that steeper slopes reduce the filtering efficiency of meadowland areas.

An intensive special study was undertaken to pinpoint the source of elevated NO_2+NO_3-N (almost 2,000 µg/l) between stations A01 and A02 in the Trout-Cold Creek system during the fall, 1977. Although the exact source has yet to be defined, the data show that substantial (10-fold) increases occurred immediately above station A02. In close proximity to this station there exists a clay-lined emergency storage facility of the South Tahoe Public Utility District which receives occasional diversions of partially-treated sewage effluent. It is possible that exfiltration from the impoundment (especially following the drought period of 1976-1977) could have contributed to the elevated levels of NO_2+NO_3-N. Another possible source of the NO_2+NO_3-N is exfiltration from sewage transport lines that transect the meadow near the site.

A luxuriant growth of Spirogyra sp. was observed in the stream which corresponded in distribution with the area of high NO_2+NO_3-N levels. This provided a graphic example of the nitrogen limitation of Lake Tahoe tributary waters and responses of algae to additions of this nutrient.

An interesting note is that the sheet flow in the Trout-Cold Creek meadowland, which was responsible for reducing the concentrations of nutrients and sediments in the system, was a result of beaver dams constructed on the creek.

The amount of water flowing across the meadowland from site A04 to A09 on Trout-Cold Creek was directly dependent on the flow. During the low summer flow the water was restricted by its channel boundaries. As a result of both decreased flows across the meadowland and grazing activities, slight net increases in nutrient concentrations were observed through the summer.

Figure 9 summarizes data (see Appendix D) for annual suspended sediment loads and flow to four of the meadowlands. The ratio of suspended sediment (TNFILT) load to annual flow was similar in the continuous flow systems; it was much higher in the intermittent Blackwood Road Drainage system. Although Blackwood Road had only 1 percent of the flow of Trout-Cold Creek, it carried an equivalent of about one-third of the annual TNFILT load noted for Trout-Cold Creek.

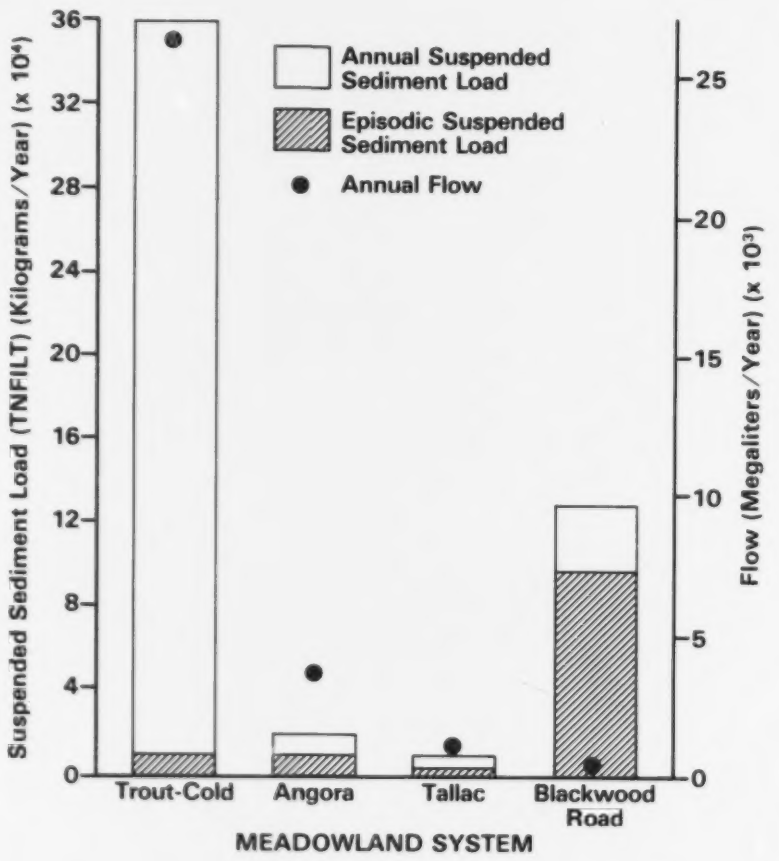

Figure 9. Annual suspended sediment loads and annual flow.

The percentage of the annual TNFILT load contributed during storm episodes varied widely by system, even though the absolute loads associated with episodes were similar among the three continuously flowing systems (Table 23). The annual TNFILT load was, in turn, a function of the annual flow.

TABLE 23. ANNUAL SUSPENDED SEDIMENT LOADS AND ANNUAL FLOW

System	Annual Suspended Sediment Load at Inlet (kg/yr)	% of Annual Load Contributed During Episodes	Annual Flow (megaliters/yr)
Trout-Cold Creek	360,232	3	30,011.6
Angora Creek	19,911+	48	3,710.6
Tallac Creek	6,930	29	975.7
Blackwood Creek	131,298	86	401.5

The intermittent Blackwood Road Drainage had a substantially higher load of TNFILT during snowmelt periods and storm episodes than the continuous flow systems. It is likely that this high load was a result of the disturbed nature of the watershed. That the episodic load represented such a large proportion of the annual load (86 percent) is not surprising, as disturbed areas are more susceptible to the effects of stormwater runoff (Darnell 1976).

The data (Appendix D) demonstrate a positive relationship between monthly flow, nutrient, and sediment levels. This is consistent with the findings of Avco Economic Systems Corporation (1970). The greatest flows occurred during spring snowmelt, in May and June.

The functioning meadowland systems showed the greatest filtering effectiveness during the periods of highest flow.

Due to the small data base, conclusions drawn from the summer lake data should be conservative. A one-way analysis of variance was not significant between stations at the 0.05 level of probability. Statistical analysis suggests that nearshore lake stations are homogeneous with relation to most parameters. Goldman (1974) stresses the importance of monitoring tributary and nearshore waters of Lake Tahoe utilizing sensitive measures of primary productivity and heterotrophic activity. For purposes of determining subtle differences in the littoral zones of Lake Tahoe an extensive network of sampling stations consisting of several transect sites to address littoral drift patterns should be included in future studies. Data suggest that within the littoral zone of Lake Tahoe the impacts due to tributary inputs are dispersed over short periods of time and short distances to create a relatively homogeneous nearshore environment. Ramifications of this suggest that disturbances in watersheds can have adverse impacts upon broad areas of the littoral zone.

The concentrations of nutrients and the turbidity entering the Lake at the marina from the Blackwood Road Drainage (station E05) were within the acceptable limits designated in the TRPA Regional Runoff Quality Guidelines; however, the area in which the marina water enters the Lake is a site of nuisance blooms of algae. The ultimate purpose of maintaining a high level of water quality in the tributaries is to protect the integrity of Lake Tahoe. After the water is treated by the meadowlands it must be guarded against degradation in its passage to the lake.

The quality of the surface water traveling through the Blackwood Road meadowland system was very effectively enhanced. That both particulate and dissolved nutrient fractions in the water were reduced suggests that a combination of mechanical, chemical, and/or biological mechanisms contributed to the treatment. All parameters but one show reduction in annual loading rates after-traversing the meadowland system between site E00 and E03. That exception is NH_3-N. This can be traced to a rainstorm on June 27, 1978 which contributed 62 percent of the entire annual load of NH_3-N for site E03. Reductions were observed on other dates. This was the first storm in three months so the extremely large values represent a buildup of NH_3-N on the roadways from unknown sources; the buildup was then flushed into the drainage system with the heavy rainstorm. That roadways are a source of high NH_3-N concentrations is supported by the annual mean concentrations observed at sites A16 and A17 in the Trout Creek system which drain highways. The mean NH_3-N concentrations were 437 µg/l and 299 µg/l, respectively, which represent the highest such values measured in the Tahoe Basin during this study.

In connection with nutrient levels from street runoff, a special study was conducted to determine the contributions from volcanic cinder used as a road abrasive during winter months. Laboratory tests show that it contributes high levels of phosphorus to the water passing over it. The reader is directed to Appendix F for the results of this special study.

Table 24 summarizes the trends in meadowland treatment which were observed during the study period. The following meadowland stretches have sheet flow: Trout/Cold Creek, site A04 to A09; Angora Creek (during episodes only); Sawmill Road Drainage, site C31/C32 to C33; Tallac Creek, site D04 to D05; Blackwood Road Drainage, site E00 to E03; and Chonokis/Glen Road Drainage. The remaining systems have channelized flows which generally exhibited increased concentrations in the measured constituents as the water traveled through them. The exception is Tallac Lagoon which demonstrated reductions due primarily to ponding of water.

All sheet-flow systems demonstrated filtration of nutrients and/or sediments to some extent. A summary of the phenomena occurring in the sheet-flow systems follows:

- Trout/Cold Creek, site A04 to A09 demonstrated predominately reducing trends with the exception of the low-flow period of summer when the flow was insufficient to leave the channel boundary. NH -N and NO_2+NO_3-N were removed most effectively (seasonal mean reductions up to 68 percent and 80 percent, respectively).

TABLE 24. SUMMARY OF MEADOWLAND TREATMENT TRENDS BASED ON CONSTITUENT CONCENTRATIONS

Meadow System		Parameter										
		PTOT	NH_3	NO_2NO_3	KJEL	TURB	SPCOND	TOC	POC	DOC	TOTRES	TNFILT	TFILT
Trout/Cold Creek													
A02-A03	Fall	-	+	+	*	-	+				+	+	-
	Winter	-	+	+	+	-	+				-	-	+
	Spring	+	+	+	+	-	+				+	+	+
	Summer	-	-	+	-	+	+				+	0	-
	Episodes												
	Annual	-	+	+	+	-	+				-	-	0
A04-A09	Fall	-	-	-	*	-	-				-	-	-
	Winter	-	-	-	+	+	-				-	-	-
	Spring	-	*	-	-	-	-				-	-	-
	Summer	+	+	0	+	+	+				-	-	0
	Episodes	-	+	-	-	-	+				-	-	-
	Annual	-	-	-	-	-	-				-	-	-
A06-A07	Fall	-	-	+	+	-					-	-	-
	Winter	+	+	+	+	+					+	+	0
	Spring	+	*	*	+	+					-	+	-
	Summer	+	+	*	+	+					0	-	+
	Episodes												
	Annual	+	+	+	+	+					-	+	-
Upper Truckee River													
B00-B04	Spring	+	0	*	*	+	0	+		-	+	+	+
	Summer	-	-	*	-	+	+	+	-	-	0	-	+
	Episodes	+	*	*	-	+	+	+	0	+	+	-	+
	Annual	+	-	*	-	+	0	+	-	0	+	-	+
Angora Creek													
C00-C06	Fall	+	+	+	+	-	+				+	+	+
	Winter	+	+	+	+	+	+	+	+	+	+	-	+
	Spring	+	*	*	+	+	+	+	-	+	+	+	+
	Summer	+	+	*	+	+	+	-	-	+	+		+
	Episodes	-	-	-	+	-	+	-	-	-	-	-	-
	Annual	+	+	-	+	-	+	+	+	+	+	-	+
Sawmill Road Drainage													
C31/C32-C33	Spring	+	*	*	+	-	+				-	-	
C33-C34	Spring	+	+	*	+	+	-				-	+	-
Tallac Creek													
D01-D03	Fall	+	*	*	*	-	-				-	-	+
	Winter	-	-	-	-	+	-				-	-	-
	Spring	+	+	-	-	+	-	+	+	+	-	+	-
	Summer	+	+	-	-	+	-	+	*	-	+	+	+
	Episodes	+	-	-	+	+	-	-	-	-	+	-	-
	Annual	+	+	-	+	+	-	+	-	+	-	+	-

(continued)

Key: - net reductions
+ net contributions
* levels below detection
blank = no data
0 no net change

TABLE 24. (Continued)

Meadow System		Parameter											
		PTOT	NH_3	NO_2NO_3	KJEL	TURB	SPCOND	TOC	POC	DOC	TOTRES	TNFILT	TFILT
D04-D05	Winter	+	+	-	+	+	+				+	+	+
	Spring	+	*	-	+	+	+	+		0	+	+	+
	Summer	+	+	-	+	+	+	+		+	+	-	+
	Episodes	-	+	-	+	+		+	-	+	+	+	+
	Annual	+	+	-	+	+	+	+	-	+	+	+	+
Blackwood Road Drainage													
E00-E03	Winter	-	-	-	-	-	-	-	-	+	-	-	-
	Spring	-	-	-	+	-	-	+	+	+	-	-	+
	Episodes	-	+	+	-	-	+	-	-	-	-	-	-
	Annual	-	-	-	+	-	-	-	-	-	-	-	-
E03-E05	Winter	+	+	+	+	+	+	+	+	+	+	+	+
	Spring	+	+	*	0	+	+	+	+	0	+	-	+
	Episodes	+	+	+	+	+	-	+	+	-	-	-	+
	Annual	+	+	+	+	+	+	+	+	+	-	-	+
Chonokis/Glen Road Drainage													
F01-F03	Winter	+	*	*	*	+	-	+	+	+	-	-	-
	Spring	+	*	*	+	+	-	-	-	+	+	-	+
	Episodes	+	+	*	0	+	-	+	+	-	-	-	-
	Annual	+	+	*	+	+	-	+	+	-	-	-	+
Tallac Lagoon													
G11-G02	Spring	-	-	-	+	-	+	-	-	-	+	+	+
	Episodes	+	-	-	+	+	+	-	-	-	+	-	+
	Annual	+	-	-	+	+	+	-	-	-	+	-	+
G02-G03	Spring	-	-	-	-	-	+	+	+	-	-	-	+
	Episodes												
	Annual	-	-	-	-	-	+	+	+	-	0	-	+
G11-G03	Spring	-	-	-	-	-	+	-	0	-	+	-	
	Episodes												
	Annual	-	-	-	-	-	+	+	+	-	+	-	+

Key: - net reductions
+ net contributions
* levels below detection
blank = no data
0 no net change

- The Angora Creek system filtered the water efficiently during episodes when the flows overflowed the channel boundary and coursed the meadowland in sheet flow. Mean reductions during episodes included 56 percent of NO_2+NO_3-N, 66 percent of turbidity, and 54 percent of TNFILT.

- Sawmill Road Drainage, site C31/C32 to C33, flowed only during the peak snowmelt period in spring and was adversely affected by a flushing effect also observed in other intermittent systems. The periodic flushing masked whatever filtration effects the meadowland exerted.

- The only reducing trend observed in Tallac Creek, site D04 to D05, was of NO_2+NO_3-N (mean seasonal reductions up to 91 percent). The failure of the meadowland to filter the other constituents is attributed to extensive grazing.

- The excellent reductions observed in Blackwood Road Drainage, site E00 to E03 demonstrated what is felt to be the true capabilities of meadowland treatment. Many of the parameters measured were reduced by 90 percent or more (residues, turbidity, NO_2+NO_3-N, NH_3-N, and PTOT). The spring increases in KJEL-N, POC, and DOC were probably caused by a flushing of the decomposing plant material from the meadowland.

- Chonokis/Glen Road meadowland consistently reduced TNFILT, but nutrients, when present in a detectable concentration, were usually increased. This tendency to increase nutrient concentrations with downstream flow is attributed, at least in part, to its steep slope (greater than that of other meadowlands in the study).

To take full advantage of existing treatment capabilities and to enhance the treatment potential of meadowlands, the mechanisms and processes responsible for nutrient and residue reduction must be more clearly defined. Until such additional information is obtained the integrity of this irreplaceable resource should be preserved.

Management practices which control sediment and nutrient contributions at their origin before they can be picked up and transported by surface water runoff, provide the most valuable mechanism for water pollution control in the Basin. However, meadowland treatment has been demonstrated to provide substanial reduction in such transport within the carrying capacity of the systems. Meadowlands investigated within this study exhibited such variability that it is evident natural meadowlands can only achieve the levels of treatment desired, on a general basis, with proper management. To effect optimal meadowland treatment sheet flow is required and must be artificially induced if not naturally occurring. Low-cost devices located at the inlets to meadowland areas can accomplish the dechannelization of runoff waters that is required. Other than initial costs associated with the design and construction of such devices and periodic cleaning by maintenance crews, such techniques should be quite cost and energy conservative.

While the Federal Water Pollution Control Act (Public Law 92-500) as amended by the Clean Water Act (P. L. 95-217) encourages alternative and "innovative" treatment techniques for water pollution control, constraints are also placed upon the utilization of meadow and marshlands by Executive Order 11990 (42 Fed. Reg. 26961, 1977) which calls for the protection of the nations wetlands. We believe that meadowland treatment is concurrent with the objectives of the Clean Water Act and Executive Order 11990 by providing for the preservation and enhancement of the natural and beneficial uses of wetlands.

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APPENDIX A

CONVERSION FACTORS

English		Metric
Inch	=	2.54 centimeters
Foot	=	0.305 meter
Acre	=	0.405 hectare
Acre-foot	=	1,233 cubic meters
Ounce	=	29.574 milliliters
Quart	=	1.1012 liters
Farenheit	=	9/5 (Celsius) + 32
cfs	=	28.316 liters per second

APPENDIX B

Table		Page
B-1	South Lake Tahoe Basin Precipitation (Inches), September 1977 - August 1978.	56
B-2	South Lake Tahoe Basin Temperature (°F), September 1977 - August 1978.	57
B-3	Daily Flow at Inlet and Outlet Stations	58
B-4	Flow-Load Relationships on a Monthly Basis.	68

TABLE B-1. SOUTH LAKE TAHOE BASIN PRECIPITATION (INCHES)*†, SEPTEMBER 1977 - AUGUST 1978

Day	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG
1						T		T	T			
2					0.01S		0.06S	T				
3					0.02S		0.05R					0.02R
4			0.01R		0.17S		1.61S	0.03S				0.41R
5			0.16R		0.92S	0.43S	0.32S					T
6		T	0.23R		0.12S	0.38S		0.30S			0.06R	T
7						0.88S					T	
8						0.29S	T					
9					0.51S/R	0.50S	0.01S					
10						0.20S						
11				0.42S		T						
12					0.01S	0.20S	0.18S					
13				T	0.01S	0.02S						
14				0.16R	0.71S/R			T				
15				1.96S	0.10S			0.27S	0.08S			
16	0.09R			0.18S	0.91S			0.20S				
17				2.11S	0.41S							
18				T	0.06S							
19					0.06S							
20			0.02S					0.51S				
21			2.56S	0.03S			0.31R	0.07S				
22			0.21S	0.72S								
23				0.46S			0.07R		0.04S			
24								T	0.01S			
25								0.11R				
26				0.57R				T				
27		0.20R		0.20R						0.38R		
28				0.15R		0.01S		0.08R		0.04R		
29				0.23S			T					
30				T			0.11R	T				T
31							0.39R					
Total	0.09	0.20	3.19	7.19	4.02	2.91	3.11	1.57	0.13	0.42	0.06	0.43

* Elevation of 6,300 feet (1,922 meters) R = Rain S = Snow T = Trace amount
Location: Al Tahoe Observer: C. M. Knapp

† = These data were measured in English units; see conversion factors in Appendix A.

TABLE B-2. SOUTH LAKE TAHOE BASIN TEMPERATURE (°F)*†, SEPTEMBER 1977 - AUGUST 1978

Day	SEP		OCT		NOV		DEC		JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1			66	16+	68	26	57	27			45	27	50	34	45	32	58	37	70	35	73	41	92	41
2			66	17+	70	30	64	26	44	32	42	31	47	32	48	28	67	31	70	35	67	37	91	42
3			75	23	65	30	63	32	44	32	52	27	46	31	50	30	71	33	72	37	70	35	84	48
4					57	40	60	30	38	26	55	27	46	31	41	25	65	33	76	38	75	35	88	58
5							56	26	35	32	43	29	39	33	48	25			82	41	78	44	85	49
6			76	25	47	30	61	30	38	22	35	29	50	25	37	24	56	29	85	46	77	43	85	49
7			68	26	52	25	61	27	44	10	35	28	52	27	41	20	60	28	82	43	77	48	85	50
8			72	26	49	21	56	19	45	25	43	19	50	36	47	29	66	30	84	39	80	43		
9					55	18	56	20	40	30	36	27	42	34	62	33	65	35			83	46	97	49
10			69	26	55	20	58	24	46	23	34	24			66	29	63	42	74	50			90	56
11					59	31	54	34	41	29	46	15			65	33			73	35	80	43	86	57
12	88	34	75	27	64	27	45	22	43	23	36	12	52	24	63	29			72	46	78	41		
13	76	40	73	25	60	25	47	36	51	31	41	22	48	19	57	34			71	42	83	43	77	49
14	75	47			54	24	55	40	41	30	46	7	53	21	53	35			70	47	86	47	76	37
15	69	32			68	24	41	18	34	25	38	19	56	20	43	28	51	31	66	35	83	43	79	40
16	59	24+	78	27	60	25	39	18	38	32	43	15	61	23	39	23	57	31	69	38	81	35	73	53
17	40	35+	78	28	61	26	37	25	40	26			59	26	53	20	63	35	74	36	82	41	72	33
18	54	29+	68	29			40	17	39	22			50	27	58	25	65	29	70	48	85	41	78	34
19	62	21+	70	36			41	7	47	29			60	29	53	30	70	34	78	34	86	40	80	36
20	45	35+	66	30	42	30	41	14	45	18	51	10	56	29	38	27	72	33	78	40	88	37	79	43
21	45	36+	64	30	37	32	44	26	48	14	53	19	43	36	47	18	70	55	72	38	87	43	67	47
22	42	32+	65	25	40	32	40	29	45	24	54	21	50	31	53	23	67	42	77	37	89	45		
23					52	25	44	31	31	14	53	20	46	34	57	28	44	33	74	54	89	44	73	30
24			75	37	44	34	43	19	47	5	51	26	54	26	57	35	45	29	68	47	89	44	76	36
25			71	30	55	25	42	21	47	14	53	30	60	27	46	36	55	28	72	32	88	50	76	37
26	60	40+	70	36	63	41	40	28	49	23	49	29	60	30	56	34	64	30	66	45	84	60	77	33
27	58	43+	50	33	52	29	47	32	46	15	48	27	64	31	60	36	73	33	70	45	88	47	81	36
28	55	46+	53	31	54	25	42	34	50	24	47	20	63	29	54	29	75	36	58	41	85	44	82	40
29	57	19+	52	36	54	27	42	36	50	18			61	33	57	31	80	39	70	38	88	41	85	40
30	57	15+	58	34	52	28	38	30	48	15			56	42	46	36	71	34	74	40	91	47	81	39
31			64	33			40	16	48	24			43	34			66	32			90	45	79	36
$\bar{X}$	59	33	68	29	55	28	48	26	39	22	45	22	52	28	49	29	64	33	73	41	83	43	81	43

* Elevation of 6300 feet (1922 meters)
Location: Al Tahoe Observer: C. M. Knapp
† These data were measured in English units; see conversion factors in Appendix A.
+ South Tahoe Public Utility District Station

TABLE B-3. DAILY FLOW†† AT INLET AND OUTLET STATIONS

Station	Date	Flow (cfs)
A01	9-13-77	4*
	9-16-77 †	4*
	9-21-77	4*
	9-28-77	4*
	10-05-77	4*
	10-12-77	4*
	10-19-77	5*
	10-26-77	6*
	10-27-77 †	7*
	10-27-77	6*
	11-03-77	7*
	11-05-77 †	6*
	11-16-77	4*
	11-22-77	7*
	11-29-77	7*
	12-07-77	6
	12-12-77	2
	12-14-77 †	5*
	12-15-77 †	10*
	12-21-77	4
	12-28-77	3
	1-09-78 †	4
	1-27-78	3
	2-22-78	4
	3-08-78	4
	3-21-78 †	4*
	3-29-78	13
A01 (cont)	3-31-78	8
	4-12-78	7
	4-18-78	8*
	4-27-78	8
	5-04-78	17
	5-17-78	24
	5-25-78	14
	5-31-78	26
	6-05-78	32
	6-14-78	30
	6-20-78	27
	6-27-78 †	20*
	7-06-78	19*
	7-06-78 †	19
	7-13-78	22
	7-20-78	24
	8-01-78	10
	8-03-78 †	10*
A03	9-13-77	4*
	9-16-77 †	4*
	9-21-77	4*
	9-28-77	4*
	10-05-77	4*
	10-12-77	4*
	10-19-77	5*
	10-26-77	6*
	10-27-77 †	7*

(continued)

TABLE B-3. (Continued)

Station	Date	Flow (cfs)
A03 (cont)	10-27-77	6*
	11-03-77	7*
	11-05-77 †	6*
	11-16-77	4*
	11-22-77	7*
	11-29-77	7*
	12-07-77	6
	12-12-77	2
	12-14-77 †	5*
	12-15-77 †	10*
	12-21-77	4
	12-28-77	3
	1-09-78 †	4
	1-27-78	3
	2-22-78	4
	3-08-78	4
	3-21-78 †	4*
	3-29-78	13
	3-31-78 †	8
	4-12-78	7
	4-18-78	8*
	4-27-78	8
	5-04-78	17
	5-17-78	24
	5-25-78	14
	5-31-78	26
	6-05-78	32
A03 (cont)	6-14-78	30
	6-20-78	27
	6-27-78 †	20*
	7-06-78	19
	7-06-78 †	19*
	7-13-78	22
	7-20-78	24
	8-01-78	10
	8-03-78 †	10*
A04	9-13-77	4*
	9-21-77	4*
	9-28-77	4*
	10-05-77	4*
	10-12-77	4*
	10-19-77	4*
	10-26-77	4*
	10-27-77 †	5*
	11-03-77	7*
	11-16-77	6*
	11-22-77	8*
	11-29-77	2*
	12-07-77	3
	12-12-77	5
	12-28-77	7
	1-27-78	4
	2-22-78	4
	3-08-78	7

(continued)

TABLE B-3. (Continued)

Station	Date	Flow (cfs)
A04 (cont)	3-29-78	17
	4-12-78	12
	4-27-78	13
	5-04-78	48
	5-17-78	50
	5-25-78	57
	5-31-78	54*
	6-05-78	54*
	6-14-78	54*
	7-06-78	63
	7-13-78	56
	7-20-78	52
	8-01-78	38
A06	9-13-77	8*
	9-16-77 †	8*
	9-21-77	8*
	9-28-77	8*
	10-05-77	8*
	10-12-77	8*
	10-19-77	10*
	10-26-77	12*
	10-27-77 †	14*
	10-27-77	12*
	11-03-77	14*
	11-05-77 †	12*
	11-16-77	8*
	11-22-77	14*
A06 (cont)	11-29-77	14*
	12-07-77	11
	12-12-77	14
	12-14-77 †	16*
	12-15-77 †	30*
	12-21-77	12
	12-28-77	12
	1-09-78 †	8*
	1-27-78	13
	2-22-78	12*
	3-08-78	18
	3-21-78 †	20*
	3-29-78	25
	3-31-78 †	50*
	4-12-78	28
	4-18-78	20*
	4-27-78	25
	5-04-78	29
	5-17-78	50
	5-25-78	40
	5-31-78	78
	6-05-78	90*
	6-14-78	78*
	6-20-78	53
	6-27-78 †	60*
	7-06-78	34
	7-06-78 †	32*

(continued)

TABLE B-3. (Continued)

Station	Date	Flow (cfs)
A06 (cont)	7-13-78	30
	7-20-78	24
	8-01-78	19
	8-03-78 †	13*
A07	9-13-77	8*
	9-16-77 †	8*
	9-21-77	8*
	9-28-77	8*
	10-05-77	8*
	10-12-77	8*
	10-19-77	10*
	10-26-77	12*
	10-27-77 †	14*
	10-27-77	12*
	11-03-77	14*
	11-05-77 †	12*
	11-16-77	8*
	11-22-77	14*
	11-29-77	14*
	12-07-77	11
	12-12-77	14
	12-14-77 †	16*
	12-15-77 †	30*
	12-21-77	12
	12-28-77	12
	1-09-78 †	8*
	1-27-78	13
A07 (cont)	2-22-78	12*
	3-08-78	18
	3-21-78 †	20*
	3-29-78	25
	3-31-78 †	50*
	4-12-78	28
	4-18-78	20*
	4-27-78	25
	5-04-78	29
	5-17-78	50
	5-25-78	40
	5-31-78	78
	6-05-78	90*
	6-14-78	78*
	6-20-78	53
	6-27-78 †	60*
	7-06-78	34
	7-06-78 †	32*
	7-13-78	30
	7-20-78	24
	8-01-78	19
	8-03-78 †	13*
A09	9-13-77	12
	9-16-77 †	12
	9-21-77	12
	9-28-77	12
	10-05-77	12

(continued)

TABLE B-3. (Continued)

Station	Date	Flow (cfs)	Station	Date	Flow (cfs)
A09 (cont)	10-12-77	12	A09 (cont)	5-17-78	65
	10-19-77	15		5-25-78	58
	10-26-77	18		5-31-78	89
	10-27-77†	20		6-05-78	107
	10-27-77	18		6-14-78	115
	11-03-77	20		6-20-78	90
	11-05-77†	18		6-27-78†	80
	11-16-77	12		7-06-78	57
	11-22-77	22		7-06-78†	54
	11-29-77	20		7-13-78	55
	12-07-77	20		7-20-78	45
	12-12-77	22		8-01-78	30
	12-14-77†	22		8-03-78†	29
	12-15-77†	40	C01	9-16-77†	0.25*
	12-21-77	14		9-21-77	0.60*
	12-28-77	14		9-28-77	0.60*
	1-09-78†	10		10-05-77	0.56*
	1-27-78	25		10-12-77	0.56*
	2-22-78	16		10-19-77	0.56*
	3-08-78	32		10-26-77	0.56*
	3-21-78†	25		10-27-77†	6.75*
	3-29-78	37		10-27-77	0.68*
	3-31-78†	56		11-02-77	0.59*
	4-12-78	36		11-05-77†	0.70*
	4-18-78	26		11-15-77	0.63*
	4-27-78	35		11-21-77†	0.63*
	5-04-78	50		11-28-77	0.50

(continued)

TABLE B-3. (Continued)

Station	Date	Flow (cfs)
C01 (cont)	12-05-77	0.44
	12-13-77	0.28
	12-14-77†	9.96*
	12-21-77	1.64
	1-09-78†	5.40*
	1-26-78	1.26
	2-21-78	1.76
	3-07-78	3.36
	3-21-78†	5.04*
	3-28-78	3.91
	3-31-78†	8.40*
	4-11-78	5.40*
	4-25-78	9.50
	5-02-78	8.74*
	5-16-78	10.22*
	5-24-78	11.43*
	5-30-78	11.14
	6-06-78	14.90
	6-14-78	14.00
	6-20-78	10.90
	6-27-78†	25.60*
	6-27-78†	20.50*
	7-05-78	7.40
	7-06-78	12.40*
	7-12-78	5.30
	7-19-78	9.40*
	8-02-78	3.95*
C01 (cont)	8-03-78†	0.79*
	8-15-78	1.14
C06	9-21-77	2.50*
	9-28-77	2.50*
	10-05-77	1.75*
	10-12-77	1.75*
	10-19-77	1.75*
	10-26-77	1.75*
	10-27-77†	6.40*
	10-27-77	2.45*
	11-02-77	1.75*
	11-05-77†	3.36*
	11-15-77	3.92*
	11-21-77†	3.92*
	11-28-77	3.52*
	12-05-77	2.67
	12-13-77	2.99
	12-14-77†	12.96*
	12-21-77	5.46
	1-09-78†	11.90*
	1-26-78	4.99*
	2-21-78	9.36
	3-07-78	11.69
	3-28-78	18.10*
	3-31-78†	31.10
	4-11-78	11.90
	4-25-78	20.50

(continued)

TABLE B-3. (Continued)

Station	Date	Flow (cfs)
C06 (cont)	5-02-78	17.47
	5-16-78	18.11
	5-24-78	19.75
	5-30-78	20.60*
	6-06-78	20.60
	6-14-78	26.04
	6-20-78	16.46
	6-27-78 †	30.90*
	6-27-78 †	24.04*
	7-05-78	7.86
	7-06-78 †	17.17*
	7-12-78	5.92
	7-19-78	4.73
	8-02-78	0.94
	8-15-78	1.65
D01	9-21-77	0.12*
	9-28-77	0.12*
	10-05-77	0.30*
	10-12-77	0.30*
	10-19-77	0.30*
	10-26-77	0.30*
	10-27-77 †	0.40*
	10-27-77	0.82*
	11-02-77	0.31*
	11-05-77 †	0.35*
	11-15-77	0.40*
	11-22-77	0.28*
D01 (cont)	11-28-77	0.38*
	12-05-77	0.27
	12-13-77	0.15
	12-14-77 †	5.04*
	1-09-78 †	2.10*
	1-26-78	0.88*
	2-21-78	0.80
	3-07-78	0.58
	3-21-78 †	1.52*
	3-28-78	1.02
	4-11-78	3.30
	4-18-78	2.00
	4-25-78	1.30
	5-02-78	0.73
	5-16-78	0.82*
	5-24-78	0.80
	5-30-78	0.84
	6-06-78	4.48
	6-13-78	5.32
	6-20-78	2.21
	6-27-78 †	7.00
	6-27-78 †	6.00
	7-05-78	1.47
	7-12-78	1.18
	7-19-78	1.36
	8-02-78	1.24
	8-15-78	1.02

(continued)

TABLE B-3. (Continued)

Station	Date	Flow (cfs)	Station	Date	Flow (cfs)
D03 (cont)	10-05-77	1.30*	D03 (cont)	7-12-78	2.50
	10-12-77	1.30*		7-19-78	1.50
	10-19-77	1.30*		8-02-78	1.60
	10-26-77	1.30*		8-15-78	0.90
	10-27-77†	1.80*	D04	9-16-77†	0.60*
	11-02-77	1.30*		9-21-77	1.10*
	11-15-77	1.30*		9-28-77	1.10*
	11-22-77	1.30*		10-05-77	2.10*
	11-28-77	1.30*		10-12-77	2.10*
	12-05-77	0.80		10-19-77	2.10*
	12-13-77	0.70		10-26-77	2.10*
	12-14-77†	11.00		10-27-77†	2.50*
	1-09-78†	6.00*		10-27-77	3.30*
	1-26-78	1.00		11-02-77	4.60*
	2-21-78	1.20		11-05-77†	6.00*
	3-07-78	2.10		11-15-77	3.40*
	3-28-78	4.80		11-22-77	2.20*
	4-11-78	3.20		11-28-77	5.00*
	4-25-78	2.40		12-13-77	0.21
	5-02-78	1.30		12-14-77†	11.80*
	5-16-78	2.30*		1-09-78†	10.00*
	5-24-78	1.40		1-26-78	2.60
	5-30-78	1.80		2-21-78	1.20*
	6-06-78	7.00		3-06-78	2.20
	6-20-78	6.80		3-21-78†	6.00*
	6-27-78†	12.00*		3-28-78	3.10
	7-05-78	3.80		4-11-78	3.00

(continued)

TABLE B-3. (Continued)

Station	Date	Flow (cfs)
D04 (cont)	4-25-78	7.20
	5-02-78	4.80
	5-16-78	9.70
	5-24-78	9.70
	5-30-78	18.80
	6-06-78	34.10
	6-13-78	40.60
	6-20-78	11.80
	7-05-78	9.00
	7-12-78	17.10
	7-19-78	9.50
	8-02-78	3.50
	8-15-78	2.30
D05	12-14-77 †	22*
	3-28-78	15
	4-11-78	4
	4-25-78	13
	5-02-78	6
	5-16-78	12*
	5-30-78	21
	6-06-78	21
	6-13-78	44
	6-20-78	16
	6-27-78 †	50*
	6-27-78 †	48*
	7-05-78	15
	7-12-78	12
D05 (cont)	7-19-78	15
	8-02-78	4
	8-15-78	1
E00	12-14-77 †	2.10*
	12-21-77	1.40*
	1-09-78 †	0.70
	1-27-78	0.50
	2-14-78	0.70*
	2-23-78	1.00*
	3-06-78	0.78*
	3-21-78 †	8.40*
	3-29-78	1.00
	4-27-78	0.40
	5-04-78	0.70
	5-17-78	0.50
	5-25-78	0.60
	6-05-78	0.16*
	6-27-78 †	13.40*
	7-05-78	0.02
	7-06-78 †	0.02
	7-06-78	1.10*
	7-20-78	0.01
E03	12-14-77 †	2.10*
	12-21-77	1.40
	1-09-78 †	0.70
	1-27-78	0.50
	2-14-78	0.70*

(continued)

TABLE B-3. (Continued)

Station	Date	Flow (cfs)	Station	Date	Flow (cfs)
E03 (cont)	2-23-78	1.00*	E03 (cont)	5-25-78	0.60
	3-06-78	0.78*		6-05-78	0.16*
	3-21-78 †	8.40*		6-27-78 †	13.40*
	3-29-78	1.00		7-05-78	0.02*
	4-27-78	0.40		7-06-78	1.02
	5-04-78	0.70		7-06-78 †	1.10*
	5-17-78	0.50		7-20-78	0.01

* Subjective reconstruction based on field notes and climatic data.

† Episode.

†† These data were measured in English units; see conversion factors in Appendix A.

TABLE B-4. FLOW-LOAD RELATIONSHIPS ON A MONTHLY BASIS*

	September	October	November	December	January	February	March	April	May	June	July	August	Annual
Station A01													
Flow (megaliter)	294.0	369.0	458.0	294.3	221.5	294.0	611.8	564.0	1485.0	2137.0	1583.5	735.0	9047.1
PTOT	18.035	13.913	17.507	14.272	3.559	6.180	33.562	16.869	68.933	168.243	65.274	28.620	454.967
NH_3-N	6.90	8.42	10.42	6.57	4.49	5.88	21.14	11.40	29.70	43.03	55.39	21.9	225.24
NO_2+NO_3-N	20.40	7.55	28.00	9.26	8.72	8.82	25.59	18.30	78.90	72.90	31.67	14.7	324.81
KJEL-N	60.0	98.7	104.4	80.4	44.5	60.0	125.5	114.0	432.0	430.3	787.1	219.0	2555.9
TOC				1879.2	493.7	822.0	3103.2	2392.7	7300.4	10487.6	4869.8	2128.5	
DOC				623.5	492.7	587.2	2009.1	1596.4	5294.2	6235.6	2810.4	1688.1	
POC				1255.6		234.9	1094.1	796.3	2006.1	6407.4	2059.4	440.4	
TOTRES	17310	24893	28793	22344	12631	15570	36358	34050	79800	136800	57482	34500	500531
TFILT	16760	19716	25646	16426	14767	14970	35279	32280	66900	82102	49358	27150	401354
TNFILT	600	9585	6482	6507	4	600	3515	4110	12840	54698	6108	7350	112399
Station A03													
Flow (megaliter)	294.0	366.0	459.0	270.0	221.5	294.0	624.0	549.0	1485.0	2154.3	1590.0	735.0	9041.8
PTOT	9.600	10.530	13.860	6.030	4.305	6.450	25.050	23.730	74.610	190.518	63.060	33.675	461.418
NH_3-N	7.80	13.80	12.90	6.00	11.02	6.00	12.60	11.10	29.70	59.09	60.30	21.90	252.21
NO_2+NO_3-N	372.90	194.40	142.50	96.00	61.33	61.80	77.40	57.30	138.60	110.92	69.60	44.10	1426.85
KJEL-N	78.0	72.0	105.0	60.0	45.5	60.0	126.0	588.0	465.0	818.2	582.0	147.0	3146.7
TOC													
DOC													
POC													
TOTRES	30540	27780	38760	18000	15034	19950	47460	42270	90390	168660	71040	33750	603634
TFILT	29070	26700	31020	18090	14102	19080	36720	33480	67860	83070	61350	27150	447692
TNFILT	1470	6660	10620	1320	932	870	11010	8820	22560	85590	9690	6600	166142

(continued)

* Kilograms except where noted.

TABLE B-4. (Continued)

	September	October	November	December	January	February	March	April	May	June	July	August	Annual
Station A04													
Flow (megaliter)	294.0	309.0	423.0	366.0	294.0	294.0	882.0	918.0	3834.0	3963.0	4182.0	2790.0	18549.0
PTOT	14.100	13.680	19.590	12.000	7.920	9.690	24.210	26.910	161.280	330.930	161.160	94.830	876.300
NH_3-N	8.82	19.80	13.20	7.20	11.70	6.00	17.70	18.30	76.80	79.20	83.70	55.80	398.22
NO_2+NO_3-N	70.50	59.70	92.10	76.80	70.50	52.80	92.10	72.90	200.40	99.00	83.70	83.70	1054.20
KJEL-N	69.0	60.0	99.0	72.0	60.0	60.0	177.0	183.0	1050.0	1584.0	1527.0	558.0	5499.0
TOC													
DOC													
POC													
TOTRES	21570	21630	33000	23340	20250	19950	66750	61050	216720	261570	183660	133860	1063350
TFILT	21420	19980	28140	23220	19380	18480	51630	54390	168420	138720	159510	128280	831570
TNFILT	870	3240	10920	110	870	1470	15120	6690	48300	122850	24150	5580	241170
Station A06													
Flow (megaliter)	588.0	739.9	916.8	919.0	941.8	882.0	1644.0	1785.0	3615.0	5372.6	2165.4	1395.0	20964.5
PTOT	13.230	22.464	33.331	41.626	19.744	27.300	53.504	49.590	196.170	385.451	83.196	40.440	966.046
NH_3-N	14.70	14.77	18.57	19.05	28.14	17.70	32.83	35.70	76.80	149.90	77.82	27.90	513.88
NO_2+NO_3-N	11.70	18.91	48.16	19.05	19.15	17.70	62.26	35.70	76.80	173.39	43.42	27.90	554.14
KJEL-N	117.0	165.4	208.9	342.4	189.5	177.0	328.3	357.0	1203.0	1587.7	708.6	279.0	5663.8
TOC				3767.0	2374.3	2730.3	7711.4	8137.1	20922.5	28667.4	6211.7	3765.2	
DOC				652.7	2552.9	2113.8	6362.4	6118.7	13979.3	20139.1	4448.1	2928.5	
POC				988.4		616.5	1349.0	2018.4	6943.2	12550.6	1763.5	836.7	
TOTRES	39617	43758	63529	61783	60150	57240	102446	99990	201690	300782	93270	71130	1195385
TFILT	29448	38824	54308	53001	55598	47550	90284	89160	164430	185400	87257	62760	958020
TNFILT	10560	8733	9600	14492	4770	9690	12162	10830	37260	115353	6013	8370	247833

(continued)

TABLE B-4. (Continued)

	September	October	November	December	January	February	March	April	May	June	July	August	Annual
Station A07													
Flow (megaliter)	288.0	735.0	918.0	918.0	941.8	882.0	1578.0	1944.0	3615.0	5400.0	2154.0	1395.0	20768.8
PTOT	15.570	18.930	40.620	26.670	17.946	23.790	59.850	58.470	152.970	425.100	77.370	40.440	957.726
NH_3-N	11.70	14.70	28.50	18.30	37.22	17.70	31.50	39.00	72.30	108.00	81.30	27.90	488.12
NO_2+NO_3-N	14.70	17.10	49.20	18.30	19.15	17.70	56.40	49.20	72.30	108.00	43.20	27.90	493.15
KJEL-N	147.0	165.0	234.0	183.0	189.5	177.0	315.0	390.0	1050.0	2207.8	1140.0	279.0	6477.3
TOC													
DOC													
POC													
TOTRES	34350	46350	93900	49530	58460	54600	125430	110100	192180	330960	96150	65550	1257560
TFILT	32880	38580	54450	51090	57513	51090	87180	99090	160620	183810	87990	64140	968433
TNFILT	1470	11730	5340	0	948	3510	38250	11010	49440	147150	8160	1380	278388
Station A09													
Flow (megaliter)	882.0	1108.3	1357.7	1350.1	1836.0	1173.0	2561.4	2373.0	4808.0	7573.3	3851.4	2199.5	31071.7
PTOT	33.944	40.975	67.676	59.907	52.107	30.54	97.720	67.560	182.940	494.833	143.390	86.120	1357.712
NH_3-N	17.70	38.44	32.80	27.12	71.54	23.40	51.28	47.40	96.00	153.48	84.00	65.22	708.38
NO_2+NO_3-N	30.46	40.48	101.95	80.70	161.46	70.50	105.31	62.70	150.60	151.80	84.00	65.22	1105.18
KJEL-N	217.6	229.3	348.1	290.7	358.7	234.0	518.9	474.0	1362.0	1515.2	1442.7	659.3	7650.5
TOC				6416.5	5411.7	3523.0	11733.2	10500.0	24805.1	33354.2	15380.4	6385.4	
DOC				3374.0	3618.4	3757.8	9579.6	8310.0	18512.7	906724.5	7453.4	3963.3	
POC				3042.4	1793.3		2153.6	3360.0	6292.4	17776.3	7927.0	2422.0	
TOTRES	61650	70675	84660	86669	118859	76320	181257	128880	235320	435455	1734420	101310	3315475
TFILT	51960	74921	78360	78251	107922	66930	154389	130740	214920	255047	152439	96408	1462287
TNFILT	9690	3410	20700	16513	10937	9390	26868	7710	40740	180438	20981	4901	352278

(continued)

TABLE B-4. (Continued)

	September	October	November	December	January	February	March	April	May	June	July	August	Annual
Station A37													
Flow (megaliter)	882.0	1101.0	1377.0	1212.0	1163.2	1173.0	2202.0	2496.0	5100.0	7584.0	3744.0	2127.0	30161.2
PTOT	25.680	29.970	54.480	32.700	22.280	30.240	84.930	82.200	227.580	631.380	140.400	74.190	436.030
NH_3-N	20.40	28.20	41.70	24.30	48.24	23.40	44.10	49.80	102.00	167.40	141.60	49.80	740.94
NO_2+NO_3-N	352.20	211.20	192.00	114.60	80.48	79.20	133.80	106.50	210.90	218.70	112.50	72.00	1884.08
KJEL-N	234.0	237.0	339.0	243.0	232.1	234.0	441.0	975.0	1512.0	2559.0	1722.0	426.0	9154.1
TOC													
DOC													
POC													
TOTRES	64740	73890	132690	69300	73494	74580	172890	152370	282600	499620	163530	99300	1859004
TFILT	61500	63720	82800	71640	71615	70170	123930	132540	228450	266850	145020	91290	1409525
TNFILT	3240	24210	20820	1320	1879	4410	49260	19800	76560	232770	18480	8010	460759
Station C01/C00													
Flow (megaliter)	44.1	42.3	42.4	79.5	100.2	120.0	282.1	510.0	762.0	1002.0	540.0	186.0	3710.6
PTOT	1.236	1.587	1.061	7.888	1.817	2.430	15.328	9.120	12.780	17.897	12.390	4.710	88.244
NH_3-N	1.17	1.02	1.05	1.65	3.74	2.4	5.94	10.20	15.00	20.73	13.50	3.60	80.00
NO_2+NO_3-N	0.90	1.42	1.75	15.04	2.00	2.4	9.06	10.20	15.00	20.73	10.80	3.60	92.90
KJEL-N	8.8	10.0	9.4	26.2	20.0	24.0	57.0	102.0	189.0	270.5	33.0	51.0	800.9
TOC				615.1	498.1	529.6	1309.1	2618.7	3313.7	3133.3	1485.3	570.7	
DOC				294.0	349.5	542.5	861.0	1666.0	2401.2	3610.6	1549.6	417.4	
POC				321.1	148.6		436.7	952.6	912.5	578.3	350.1	153.3	
TOTRES	2590	2577	2402	14580	5506	6180	12248	15060	22320	24842	10110	8400	126815
TFILT	2465	2519	2328	5263	4697	5670	11258	13860	19890	23992	10110	14190	116242
TNFILT	120	493	179	9519	781	510	1888	1170	2400	2851			19911+

(continued)

TABLE B-4. (Continued)

	September	October	November	December	January	February	March	April	May	June	July	August	Annual
Station A06													
Flow (megaliter)	183.0	139.4	227.8	295.6	382.9	687.0	1092.0	1188.0	1392.0	1557.8	479.9	96.0	7721.4
PTOT	7.530	5.638	6.599	17.055	11.982	21.300	38.700	37.410	30.090	42.649	14.608	3.120	236.681
NH_3-N	8.40	3.49	6.14	8.52	11.10	20.70	30.81	23.70	27.000	31.05	15.60	3.00	189.51
NO_2+NO_3-N	6.30	3.75	12.29	14.08	7.83	13.80	26.75	23.70	27.00	31.59	9.54	1.80	178.43
KJEL-N	45.0	40.8	57.5	104.2	116.0	138.0	285.0	312.0	312.0	521.9	263.6	18.0	2214.0
TOC				1630.5	2328.4	3709.7	5719.4	6508.0	6564.3	6154.8	1394.8	266.1	
DOC				946.6	1520.5	3297.5	3961.9	4879.7	4920.3	6176.1	1252.3	265.3	
POC				749.7	808.0	412.2	1757.5	1628.3	1644.0	1449.1	398.9	13.8	
TOTRES	14040	10921	16520	24094	29126	46020	64470	64140	51000	47152	15780	3780	387043
TFILT	13590	9255	17485	17030	26890	43290	61170	58830	46110	41400	15696	3450	354196
TNFILT	180	2769	436	7093	2236	2760	3270	4890	4890	5781		330	34635+
Station D01/D11													
Flow (megaliter)	8.8	30.9	25.2	27.2	63.0	58.7	61.7	162.0	58.5	298.7	98.1	82.9	975.7
PTOT	0.210	1.024	0.832	1.683	1.078	0.810	3.393	4.602	1.146	6.387	2.670	2.385	26.220
NH_3-N	0.18	0.63	0.74	0.66	2.71	1.17	1.24	3.23	1.17	6.27	2.25	1.66	21.91
NO_2+NO_3-N	0.21	2.75	5.97	10.99	12.59	8.82	10.42	43.01	5.53	12.25	2.94	2.49	117.97
KJEL-N	1.8	7.4	11.8	15.8	21.1	17.7	24.2	60.0	15.6	79.9	40.1	16.6	312.0
TOC				304.9	610.3	375.8	462.6	1185.3	383.4	1233.9	355.4	316.0	
DOC				155.8	303.9	287.7	266.8	831.8	248.2	1131.9	279.9	210.3	
POC				183.8	144.9	88.1	195.8	353.5	135.2	573.5	148.1	105.7	
TOTRES	690	2962	2724	3504	5336	4580	4360	11095	3897	10666	5370	6189	61373
TFILT	630	2370	2612	2496	5416	4169	4270	10236	3790	9256	2945	6007	54197
TNFILT	75	1201	109	1008	211	411	207	1336	140	2050	0	182	6930

(continued)

TABLE B-4. (Continued)

	September	October	November	December	January	February	March	April	May	June	July	August	Annual
Station D03													
Flow (megaliter)		100.3	95.4	80.1	85.6	88.0	253.2	205.5	124.8	518.9	190.8	91.7	1834.3+
PTOT		2.274	3.369	11.036	1.583	1.146	9.261	4.344	2.370	13.408	6.121	2.536	57.448+
NH_3-N		2.06	2.63	1.88	1.71	2.64	5.07	5.87	2.49	10.38	6.63	1.84	43.20+
NO_2+NO_3-N		3.38	12.09	15.17	10.45	7.92	45.36	29.95	6.79	13.44	4.18	2.75	151.48+
KJEL-N		23.2	51.1	104.8	36.0	26.4	93.6	41.1	40.9	146.2	64.1	18.4	645.8+
TOC									524.0	1206.9	725.1		
DOC									441.8	1911.3	808.8		
POC									82.2				
TOTRES		7690	10241	7209	6168	5989	15545	1498	6686	20869	9540	8455	100340+
TFILT		7681	10018	6558	6144	5901	11703	11067	6251	18496	9908	7986	101713+
TNFILT		642	668	5140	235	81	8455	1409	969	2055	0	470	20124+
Station D04													
Flow (megaliter)	79.5	174.1	284.3	29.4	208.9	88.0	202.7	374.0	789.0	2116.2	871.0	212.8	5429.9
PTOT	1.674	5.488	10.940	12.709	2.959	1.321	4.342	6.584	9.323	46.934	25.092	5.148	132.514
NH_3-N	1.61	3.56	8.13	1.74	7.87	1.76	4.20	7.48	15.78	42.33	25.79	4.26	124.51
NO_2+NO_3-N	3.12	5.31	36.44	10.84	28.14	7.93	27.54	36.77	40.33	59.01	17.42	5.10	277.95
KJEL-N	15.9	36.4	112.6	101.0	65.2	17.6	40.5	74.9	175.5	522.6	242.7	42.6	1447.5
TOC				538.9	1089.8					6801.6	924.8		
DOC				173.0	825.7					7581.0	1519.3		
POC				365.9	264.1								
TOTRES	5716	12903	26321	9113	14072	5725	14781	18275	22635	56593	36392	12074	234600
TFILT	5483	13034	25292	3270	13068	5813	14282	17467	20635	48510	37652	10789	215295
TNFILT	242	296	1118	5918	1007	0	498	815	2667	8076	0	1284	21921

(continued)

TABLE B-4. (Continued)

	September	October	November	December	January	February	March	April	May	June	July	August	Annual
Station D05													
Flow (megaliter)							1100.9	623.9	954.1	2035.5	1028.0	183.5	5925.9
PTOT							95.781	25.320	15.706	45.115	38.459	7.485	227.866
NH_3-N							44.04	12.48	19.08	40.71	33.76	5.51	155.58
NO_2+NO_3-N							22.02	17.25	22.02	43.11	20.55	3.67	128.62
KJEL-N							440.4	187.2	220.2	608.8	425.7	69.7	1952.0
TOC							6055.1	3823.9	4433.1	9021.8	3882.6	778.0	27994.5
DOC							4183.5	2730.3	3376.2	7877.2	3464.2	708.3	22339.7
POC							1871.6	1093.6	1056.9	1252.8	957.8	168.8	6401.5
TOTRES							132111	43597	33395	57256	30826	14386	311571
TFILT							69358	35707	28404	55288	29945	13798	232500
TNFILT							62753	7890	4844	3934	881	587	80889
Station E00													
Flow (megaliter)							83.7	29.4	44.0	44.1	1.2		202.4
PTOT							52.352	1.762	3.273	1.022	0.287		58.696+
NH_3-N							4.35	1.47	2.40	2.30	0.12		10.64+
NO_2+NO_3-N							8.42	13.51	21.70	21.15	0.37		65.15
KJEL-N							92.8	5.9	13.7	344.4	1.2		458.0
TOC							1009.3	146.8	201.5	939.6	8.6		2305.8
DOC							440.3		171.4	409.4	6.6		1027.7+
POC							569.0		30.1	530.2	2.0		1131.3+
TOTRES							55416	4462	6229	138127	298		204532
TFILT							11165		5845	4209	190		21409+
TNFILT							44252		384	133952	108		178696+

(continued)

TABLE B-4. (Continued)

	September	October	November	December	January	February	March	April	May	June	July	August	Annual
Station E01													
Flow (megaliter)				99.5	37.2	62.4	83.7	29.4	44.0	44.1	1.2		401.5
PTOT				29.964	2.644	18.126	19.802	0.763	1.762	0.552	1.551		75.164
NH_3-N				8.05	2.25	3.12	3.19	0.59	1.37	58.04	0.04		76.65
NO_2+NO_3-N				11.18	3.36	6.24	8.89	4.99	10.23	25.78	0.27		70.94
KJEL-N				75.0	8.3	35.1	70.3	5.9	12.5	254.7	0.8		462.6
TOC				15.2	263.1	637.1	923.0	140.9	201.8				
DOC				745.4	139.3	316.3	419.9	91.0	157.8				
POC					123.8	349.4	502.9	49.9	44.0				
TOTRES				37059	6698	19710	42657	3728	4055	734969	229		849105
TFILT				19777	5393	7890	12173	3728	6987	4822	198		60968
TNFILT				17281	1603	11823	30484	0	0	70147	40		131378
Station E03													
Flow (megaliter)				99.3	37.2	62.4	83.7	29.4	44.0	44.1			400.1
PTOT				13.834	0.830	3.522	3.185+	1.791	2.040	39.727			64.929
NH_3-N				3.29	0.78	2.20	2.90+	0.59	0.87	18.26			28.89
NO_2+NO_3-N				2.24	3.57	2.20	1.59+	0.59	0.87	22.52			33.58
KJEL-N				52.1	7.8	14.7	13.1+	11.7	18.1	90.9			208.4
TOC				549.7	187.3	389.0	508.3	185.0	298.2	578.9			2696.4
DOC				460.2	134.3	293.6	429.8	126.2	218.2	378.4			2040.7
POC					55.0	95.4	78.6	58.7	80.0	200.5			568.2+
TOTRES				16547	4440	7229	7923+	3900	6006	16337			62382+
TFILT				10510	4330	7061	7515+	3900	6011	4285			43612+
TNFILT				6037	110	440	408+	0	143	12097			19235+

APPENDIX C

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

These tables present seasonal and annual values of actual changes and percent changes in constituent concentrations between inlet and outlet stations of each meadowland. A positive value represents an increase in the constituent concentration; a negative value represents a reduction in concentration within the meadowland.

Mean percent change is calculated by:

$$\frac{\text{mean outlet value - mean inlet value}}{\text{mean inlet value}} \times 100$$

As a result of extremely low levels of nitrogen in the Lake Tahoe Basin, many observations were below the detection limits of the analyses (20 µg/l for NH_3-N and NO_2+NO_3-N; 200 µg/l for KJEL-N). For these "K" values (i.e., values known to be less than detection limits) two sets of calculations were performed; one based on the lower limit of detection and the other based on 1 µg/l for NH_3-N and NO_2+NO_3-N, and 20 µg/l for KJEL-N (value presented in parentheses), the lowest values found in historical literature on Lake Tahoe tributaries. The range between the resulting values should contain the mean value for the respective parameters.

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A02-A03 NO2NO3 ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	3	3(7%)	-10(-20%) TO 20(40%)	3(7%)	-10(-20%) TO 20(40%)
50.0 -150.0	6	5(6%)	-10(-13%) TO 10(14%)	5(6%)	-10(-13%) TO 10(14%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	9	4(6%)	-10(-20%) TO 20(40%)	4(6%)	-10(-20%) TO 20(40%)
SUMMER					
0.0 - 20.0	1	20(100%)	20(100%) TO 20(100%)	20(100%)	20(100%) TO 20(100%)
20.0 - 50.0	4	15(38%)	10(25%) TO 20(50%)	15(38%)	10(25%) TO 20(50%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	16(44%)	10(25%) TO 20(100%)	16(44%)	10(25%) TO 20(100%)
FALL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	2	50(50%)	30(33%) TO 70(64%)	50(50%)	30(33%) TO 70(64%)
150.0 -300.0	1	110(65%)	110(65%) TO 110(65%)	110(65%)	110(65%) TO 110(65%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	4	243(20%)	-450(-23%) TO 660(69%)	243(20%)	-450(-23%) TO 660(69%)
TOTAL	7	169(22%)	-450(-23%) TO 660(69%)	169(22%)	-450(-23%) TO 660(69%)
WINTER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	2	265(883%)	160(533%) TO 370(1233%)	265(883%)	160(533%) TO 370(1233%)
50.0 -150.0	4	60(52%)	10(9%) TO 160(114%)	60(52%)	10(9%) TO 160(114%)
150.0 -300.0	4	65(28%)	-20(-7%) TO 180(75%)	65(28%)	-20(-7%) TO 180(75%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	1	-130(-23%)	-130(-23%) TO -130(-23%)	-130(-23%)	-130(-23%) TO -130(-23%)
TOTAL	11	82(45%)	-130(-23%) TO 370(1233%)	82(45%)	-130(-23%) TO 370(1233%)
ANNUAL					
0.0 - 20.0	1	20(100%)	20(100%) TO 20(100%)	20(100%)	20(100%) TO 20(100%)
20.0 - 50.0	9	67(167%)	-10(-20%) TO 370(1233%)	67(167%)	-10(-20%) TO 370(1233%)
50.0 -150.0	12	31(31%)	-10(-13%) TO 160(114%)	31(31%)	-10(-13%) TO 160(114%)
150.0 -300.0	5	74(34%)	-20(-7%) TO 180(75%)	74(34%)	-20(-7%) TO 180(75%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	5	148(18%)	-450(-23%) TO 660(69%)	148(18%)	-450(-23%) TO 660(69%)
TOTAL	32	69(27%)	-450(-23%) TO 660(1233%)	69(27%)	-450(-23%) TO 660(1233%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A02-A03 NH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	9	4(22%)	0(0%) TO	20(100%)	4(85%)	-19(-95%) TO	39(2900%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	9	4(22%)	0(0%) TO	20(100%)	4(85%)	-19(-95%) TO	39(2900%)
SUMMER							
0.0 - 20.0	2	5(25%)	0(0%) TO	10(50%)	15(1450%)	0(0%) TO	29(2900%)
20.0 - 50.0	3	-5(-17%)	-10(-33%) TO	0(0%)	-15(-48%)	-29(-97%) TO	0(0%)
50.0 -100.0	1	-10(-13%)	-10(-13%) TO	-10(-13%)	-10(-13%)	-10(-13%) TO	-10(-13%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	-2(-6%)	-10(-33%) TO	10(50%)	-2(-7%)	-29(-97%) TO	29(2900%)
FALL							
0.0 - 20.0	5	8(40%)	0(0%) TO	30(150%)	16(1560%)	0(0%) TO	49(4900%)
20.0 - 50.0	2	10(29%)	0(0%) TO	20(67%)	10(29%)	0(0%) TO	20(67%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	7	9(35%)	0(0%) TO	30(150%)	14(131%)	0(0%) TO	49(4900%)
WINTER							
0.0 - 20.0	7	4(21%)	0(0%) TO	30(150%)	7(188%)	0(0%) TO	30(1900%)
20.0 - 50.0	4	-3(-8%)	-20(-50%) TO	20(67%)	-3(-8%)	-20(-50%) TO	20(67%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	11	2(7%)	-20(-50%) TO	30(150%)	4(25%)	-20(-50%) TO	30(1900%)
ANNUAL							
0.0 - 20.0	23	5(26%)	0(0%) TO	30(150%)	9(245%)	-19(-95%) TO	49(4900%)
20.0 - 50.0	9	0(0%)	-20(-50%) TO	20(67%)	-2(-7%)	-29(-97%) TO	20(67%)
50.0 -100.0	1	-10(-13%)	-10(-13%) TO	-10(-13%)	-10(-13%)	-10(-13%) TO	-10(-13%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	33	3(14%)	-20(-50%) TO	30(150%)	5(40%)	-29(-97%) TO	49(4900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A02-A03 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE
SPRING					
0.0 -200.0	5	260(130%)	0(0%) TO 1100(550%)	296(2216%)	0(0%) TO 1280(64000%)
200.0 -300.0	2	200(67%)	100(33%) TO 300(100%)	200(67%)	100(33%) TO 300(1000%)
300.0 -400.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	9	189(68%)	0(0%) TO 1100(550%)	209(88%)	0(0%) TO 1280(64000%)
SUMMER					
0.0 -200.0	1	0(0%)	0(0%) TO 0(0%)	-180(-90%)	-180(-90%) TO -180(-90%)
200.0 -300.0	3	0(0%)	-100(-33%) TO 100(33%)	0(0%)	-100(-33%) TO 100(33%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	1	-100(-20%)	-100(-20%) TO -100(-20%)	-100(-20%)	-100(-20%) TO -100(-20%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	-20(-6%)	-100(-33%) TO 100(33%)	-56(-18%)	-180(-90%) TO 100(33%)
FALL					
0.0 -200.0	7	0(0%)	0(0%) TO 0(0%)	-26(-36%)	-180(-90%) TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	7	0(0%)	0(0%) TO 0(0%)	-26(-36%)	-180(-90%) TO 0(0%)
WINTER					
0.0 -200.0	9	67(33%)	0(0%) TO 600(300%)	87(433%)	0(0%) TO 780(39000%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	1	-200(-50%)	-200(-50%) TO -200(-50%)	-200(-50%)	-200(-50%) TO -200(-50%)
400.0 -900.0	1	-300(-60%)	-300(-60%) TO -300(-60%)	-480(-96%)	-480(-96%) TO -480(-96%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	11	9(4%)	-300(-60%) TO 600(300%)	9(9%)	-480(-96%) TO 780(39000%)
ANNUAL					
0.0 -200.0	22	86(43%)	0(0%) TO 1100(550%)	86(1256%)	-180(-90%) TO 1280(64000%)
200.0 -300.0	5	80(27%)	-100(-33%) TO 300(100%)	80(27%)	-100(-33%) TO 300(1000%)
300.0 -400.0	2	-100(-25%)	-200(-50%) TO 0(0%)	-100(-25%)	-200(-50%) TO 0(0%)
400.0 -900.0	3	-133(-27%)	-300(-60%) TO 0(0%)	-193(-39%)	-480(-96%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	32	83(21%)	-300(-60%) TO 1100(550%)	48(29%)	-480(-96%) TO 1280(64000%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A02-A01 PTOT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	1	2(7%)	2(7%) TO 2(7%)
35.0 - 50.0	2	2(3%)	0(0%) TO 3(6%)
50.9 - 70.0	4	9(16%)	1(2%) TO 20(37%)
70.0 - 0.0	2	31(28%)	-17(-14%) TO 78(81%)
TOTAL	9	11(10%)	-17(-14%) TO 78(81%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	1	-3(-9%)	-3(-9%) TO -3(-9%)
35.0 - 50.0	3	0(1%)	-4(-10%) TO 3(8%)
50.0 - 70.0	1	-1(-2%)	-1(-2%) TO -1(-2%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	-1(-1%)	-4(-10%) TO 3(8%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	2	-2(-6%)	-2(-9%) TO -1(-4%)
25.0 - 35.0	2	-1(-2%)	-1(-3%) TO 0(0%)
35.0 - 50.0	3	-9(-20%)	-13(-31%) TO -4(-9%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	7	-4(-13%)	-13(-31%) TO 0(0%)
WINTER			
0.0 - 20.0	3	0(0%)	-2(-11%) TO 2(11%)
20.0 - 25.0	3	-1(-4%)	-5(-21%) TO 1(5%)
25.0 - 35.0	2	-1(-4%)	-1(-4%) TO -1(-3%)
35.0 - 50.0	2	-13(-31%)	-22(-50%) TO -3(-8%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	2	-341(-88%)	-613(-91%) TO -68(-66%)
TOTAL	11	-65(-70%)	-613(-91%) TO 2(11%)
ANNUAL			
0.0 - 20.0	2	0(0%)	-2(-11%) TO 2(11%)
20.0 - 25.0	5	-1(-5%)	-5(-21%) TO 1(5%)
25.0 - 35.0	6	-1(-2%)	-3(-9%) TO 2(7%)
35.0 - 50.0	10	-8(-11%)	-22(-50%) TO 3(8%)
50.0 - 70.0	5	7(12%)	-1(-2%) TO 20(37%)
70.0 - 0.0	4	-195(-63%)	-613(-91%) TO 78(81%)
TOTAL	32	-20(-32%)	-613(-91%) TO 78(81%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A02-A01 TURB

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	4	0.3(9%)	0.1(3%) TO 0.6(24%)
5.0 - 20.0	4	-0.4(-5%)	-1.0(-8%) TO -0.1(-2%)
20.0 -100.0	1	39.0(130%)	39.0(130%) TO 39.0(130%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	9	4.3(51%)	-1.0(-8%) TO 39.0(130%)
SUMMER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	5	0.2(11%)	-0.3(-17%) TO 0.7(30%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	0.2(11%)	-0.3(-17%) TO 0.7(30%)
FALL			
0.0 - 1.0	3	0.3(58%)	-0.0(-3%) TO 0.9(225%)
1.0 - 5.0	2	-0.7(-37%)	-1.1(-41%) TO -0.3(-27%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	-0.1(-8%)	-1.1(-41%) TO 0.9(225%)
WINTER			
0.0 - 1.0	3	0.0(0%)	-0.1(-20%) TO 0.1(17%)
1.0 - 5.0	5	-0.1(-4%)	-1.4(-58%) TO 1.5(54%)
5.0 - 20.0	2	-1.7(-15%)	-6.6(-60%) TO 3.3(28%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	1	-312.0(-93%)	-312.0(-93%) TO -312.0(-93%)
TOTAL	11	-28.7(-85%)	-312.0(-93%) TO 3.3(54%)
ANNUAL			
0.0 - 1.0	6	0.2(30%)	-0.1(-20%) TO 0.9(225%)
1.0 - 5.0	16	0.0(2%)	-1.4(-58%) TO 1.5(54%)
5.0 - 20.0	6	-0.8(-9%)	-6.6(-60%) TO 3.3(28%)
20.0 -100.0	1	39.0(130%)	39.0(130%) TO 39.0(130%)
100.0 - 0.0	1	-312.0(-93%)	-312.0(-93%) TO -312.0(-93%)
TOTAL	30	-9.2(-60%)	-312.0(-93%) TO 39.0(225%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A02-A03 TOTRES ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 45.0	1	25(86%)	25(86%) TO 25(86%)
45.0 - 55.0	2	10(19%)	-1(-2%) TO 21(40%)
55.0 - 65.0	4	6(10%)	-2(-3%) TO 11(20%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	1	4(5%)	4(5%) TO 4(5%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	8	9(15%)	-2(-3%) TO 25(86%)
SUMMER			
0.0 - 45.0	1	5(13%)	5(13%) TO 5(13%)
45.0 - 55.0	1	-1(-2%)	-1(-2%) TO -1(-2%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	2(5%)	-1(-2%) TO 5(13%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	1	-7(-11%)	-7(-11%) TO -7(-11%)
65.0 - 75.0	2	2(3%)	-4(-6%) TO 8(11%)
75.0 -105.0	2	17(18%)	15(18%) TO 18(19%)
105.0 - 0.0	1	-26(-20%)	-26(-20%) TO -26(-20%)
TOTAL	6	1(1%)	-26(-20%) TO 18(19%)
WINTER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	3	20(32%)	2(3%) TO 56(93%)
65.0 - 75.0	4	-3(-4%)	-9(-13%) TO 8(12%)
75.0 -105.0	1	8(9%)	8(9%) TO 8(9%)
105.0 - 0.0	2	-118(-60%)	-189(-69%) TO -47(-39%)
TOTAL	10	-18(-18%)	-189(-69%) TO 56(93%)
ANNUAL			
0.0 - 45.0	2	15(36%)	5(13%) TO 25(56%)
45.0 - 55.0	3	6(12%)	-1(-2%) TO 21(40%)
55.0 - 65.0	8	10(16%)	-7(-11%) TO 56(93%)
65.0 - 75.0	6	-1(-1%)	-9(-13%) TO 8(12%)
75.0 -105.0	4	11(13%)	4(5%) TO 18(19%)
105.0 - 0.0	3	-87(-50%)	-189(-69%) TO -26(-20%)
TOTAL	26	-4(-5%)	-189(-69%) TO 56(93%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A02-A03 TOTNFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	2	2(25%)	-1(-17%) TO 5(50%)
10.0 - 20.0	5	12(95%)	2(17%) TO 24(210%)
20.0 -100.0	1	1(2%)	1(2%) TO 1(2%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	8	8(52%)	-1(-17%) TO 24(210%)
SUMMER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	1	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.0	3	3(91%)	0(0%) TO 5(167%)
5.0 - 10.0	1	5(71%)	5(71%) TO 5(71%)
10.0 - 20.0	1	12(75%)	12(75%) TO 12(75%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	5(79%)	0(0%) TO 12(167%)
WINTER			
0.0 - 5.0	3	-1(-14%)	-2(-40%) TO 1(50%)
5.0 - 10.0	1	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	1	15(100%)	15(100%) TO 15(100%)
20.0 -100.0	1	-44(-73%)	-44(-73%) TO -44(-73%)
100.0 - 0.0	1	-180(-89%)	-180(-89%) TO -180(-89%)
TOTAL	6	-35(-72%)	-180(-89%) TO 15(100%)
ANNUAL			
0.0 - 5.0	5	2(50%)	-2(-40%) TO 5(167%)
5.0 - 10.0	5	2(23%)	-1(-17%) TO 5(71%)
10.0 - 20.0	7	13(93%)	2(17%) TO 24(210%)
20.0 -100.0	2	-22(-41%)	-44(-73%) TO 1(2%)
100.0 - 0.0	1	-180(-89%)	-180(-89%) TO -180(-89%)
TOTAL	20	-6(-25%)	-180(-89%) TO 24(210%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A02-A03 TOTFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	1	1(3%)	1(3%) TO 1(3%)
35.0 - 49.0	6	0(0%)	-4(-9%) TO 3(8%)
49.0 - 59.0	1	5(10%)	5(10%) TO 5(10%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	8	1(2%)	-4(-9%) TO 5(10%)
SUMMER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	2	-1(-3%)	-1(-3%) TO -1(-3%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	-1(-3%)	-1(-3%) TO -1(-3%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	1	-4(-7%)	-4(-7%) TO -4(-7%)
59.0 - 69.0	1	-3(-5%)	-3(-5%) TO -3(-5%)
69.0 - 85.0	2	7(9%)	4(5%) TO 10(13%)
85.0 - 0.0	2	-7(-6%)	-26(-20%) TO 13(13%)
TOTAL	6	-1(-1%)	-26(-20%) TO 13(13%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	1	28(78%)	28(78%) TO 28(78%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	5	-0(-0%)	-3(-5%) TO 3(5%)
69.0 - 85.0	4	-4(-6%)	-7(-10%) TO 4(5%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	10	1(2%)	-7(-10%) TO 28(78%)
ANNUAL			
0.0 - 35.0	1	1(3%)	1(3%) TO 1(3%)
35.0 - 49.0	9	3(7%)	-4(-9%) TO 28(78%)
49.0 - 59.0	2	1(1%)	-4(-7%) TO 5(10%)
59.0 - 69.0	6	-1(-1%)	-3(-5%) TO 3(5%)
69.0 - 85.0	6	-1(-1%)	-7(-10%) TO 10(13%)
85.0 - 0.0	2	-7(-6%)	-26(-20%) TO 13(13%)
TOTAL	26	0(1%)	-26(-20%) TO 28(78%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A02-A03 SP_COND ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	9	1(3%)	-1(-3%) TO 6(19%)
TOTAL	9	1(3%)	-1(-3%) TO 6(19%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	5	1(3%)	-1(-3%) TO 3(10%)
TOTAL	5	1(3%)	-1(-3%) TO 3(10%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	3	7(10%)	4(5%) TO 13(22%)
TOTAL	3	7(10%)	4(5%) TO 13(22%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	11	1(2%)	-7(-9%) TO 8(11%)
TOTAL	11	1(2%)	-7(-9%) TO 8(11%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	28	2(3%)	-7(-9%) TO 13(22%)
TOTAL	28	2(3%)	-7(-9%) TO 13(22%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A06-A07 NO2NO3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	7	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	7	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
SUMMER					
0.0 - 20.0	5	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 - 20.0	7	4(21%)	0(0%) TO 20(100%)	10(971%)	0(0%) TO 39(3900%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	7	4(21%)	0(0%) TO 20(100%)	10(971%)	0(0%) TO 39(3900%)
WINTER					
0.0 - 20.0	7	3(14%)	0(0%) TO 10(50%)	3(31%)	-19(-95%) TO 29(2900%)
20.0 - 50.0	4	-3(-7%)	-10(-20%) TO 0(0%)	-3(-7%)	-10(-20%) TO 0(0%)
50.0 -150.0	1	5(4%)	5(4%) TO 5(4%)	5(4%)	5(4%) TO 5(4%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	12	1(4%)	-10(-20%) TO 10(50%)	1(8%)	-19(-95%) TO 29(2900%)
ANNUAL					
0.0 - 20.0	26	2(10%)	0(0%) TO 20(100%)	3(86%)	-19(-95%) TO 39(3900%)
20.0 - 50.0	4	-3(-7%)	-10(-20%) TO 0(0%)	-3(-7%)	-10(-20%) TO 0(0%)
50.0 -150.0	1	5(4%)	5(4%) TO 5(4%)	5(4%)	5(4%) TO 5(4%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	31	1(4%)	-10(-20%) TO 20(100%)	3(236)	-19(-95%) TO 39(3900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A06-A07 NH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	7	0(0%)	0(0%) TO 0(0%)	3(271%)	0(0%) TO 19(1900%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	7	0(0%)	0(0%) TO 0(0%)	3(271%)	0(0%) TO 19(1900%)
SUMMER					
0.0 - 20.0	3	7(33%)	0(0%) TO 10(50%)	19(264%)	0(0%) TO 29(2900%)
20.0 - 50.0	1	10(33%)	10(33%) TO 10(33%)	10(33%)	10(33%) TO 10(33%)
50.0 -100.0	1	-10(-17%)	-10(-17%) TO -10(-17%)	-10(-17%)	-10(-17%) TO -10(-17%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	4(13%)	-10(-17%) TO 10(50%)	12(52%)	-10(-17%) TO 29(2900%)
FALL					
0.0 - 20.0	6	0(0%)	0(0%) TO 0(0%)	10(950%)	0(0%) TO 19(1900%)
20.0 - 50.0	1	-10(-33%)	-10(-33%) TO -10(-33%)	-29(-97%)	-29(-97%) TO -29(-97%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	7	-1(-7%)	-10(-33%) TO 0(0%)	4(78%)	-29(-97%) TO 19(1900%)
WINTER					
0.0 - 20.0	10	4(20%)	0(0%) TO 40(200%)	8(780%)	0(0%) TO 59(5900%)
20.0 - 50.0	2	0(0%)	-10(-33%) TO 10(33%)	0(0%)	-10(-33%) TO 10(33%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	12	3(15%)	-10(-33%) TO 40(200%)	7(1116%)	-10(-33%) TO 59(5900%)
ANNUAL					
0.0 - 20.0	26	2(12%)	0(0%) TO 40(200%)	8(471%)	0(0%) TO 59(5900%)
20.0 - 50.0	4	0(0%)	-10(-33%) TO 10(33%)	-5(-16%)	-29(-97%) TO 10(33%)
50.0 -100.0	1	-10(-17%)	-10(-17%) TO -10(-17%)	-10(-17%)	-10(-17%) TO -10(-17%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	31	2(7%)	-10(-33%) TO 40(200%)	6(816%)	-29(-97%) TO 59(5900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A06-A07 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE
SPRING					
0.0 -200.0	4	0(0%)	0(0%) TO 0(0%)	-45(-69%)	-180(-90%) TO 0(0%)
200.0 -300.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	2	50(13%)	0(0%) TO 100(25%)	50(13%)	0(0%) TO 100(25%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	7	14(5%)	0(0%) TO 100(25%)	-11(-6%)	-180(-90%) TO 100(25%)
SUMMER					
0.0 -200.0	3	167(83%)	0(0%) TO 500(250%)	167(119%)	0(0%) TO 500(250%)
200.0 -300.0	1	100(33%)	100(33%) TO 100(33%)	100(33%)	100(33%) TO 100(33%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	120(43%)	0(0%) TO 500(250%)	120(49%)	0(0%) TO 500(250%)
FALL					
0.0 -200.0	6	17(8%)	0(0%) TO 100(50%)	77(383%)	0(0%) TO 280(1400%)
200.0 -300.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	7	14(7%)	0(0%) TO 100(50%)	66(110%)	0(0%) TO 280(1400%)
WINTER					
0.0 -200.0	11	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	1	100(33%)	100(33%) TO 100(33%)	100(33%)	100(33%) TO 100(33%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	12	8(4%)	0(0%) TO 100(33%)	8(19%)	0(0%) TO 100(33%)
ANNUAL					
0.0 -200.0	24	25(13%)	0(0%) TO 500(250%)	33(76%)	-180(-90%) TO 500(1400%)
200.0 -300.0	4	50(17%)	0(0%) TO 100(33%)	50(17%)	0(0%) TO 100(33%)
300.0 -400.0	2	50(13%)	0(0%) TO 100(25%)	50(13%)	0(0%) TO 100(25%)
400.0 -900.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	31	29(12%)	0(0%) TO 500(250%)	35(31%)	-180(-90%) TO 500(1400%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A06-A07 PTOT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	1	2(7%)	2(7%) TO 2(7%)
35.0 - 50.0	4	6(13%)	2(4%) TO 9(23%)
50.0 - 70.0	1	-20(-31%)	-20(-31%) TO -20(-31%)
70.0 - 0.0	1	7(6%)	7(6%) TO 7(6%)
TOTAL	7	2(3%)	-20(-31%) TO 9(23%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	4	1(3%)	0(0%) TO 2(7%)
35.0 - 50.0	1	-1(-2%)	-1(-2%) TO -1(-2%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	0(1%)	-1(-2%) TO 2(7%)
FALL			
0.0 - 20.0	3	8(45%)	6(30%) TO 10(63%)
20.0 - 25.0	2	0(0%)	-1(-4%) TO 1(5%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	1	-36(-59%)	-36(-59%) TO -36(-59%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	6	-2(-7%)	-36(-59%) TO 10(63%)
WINTER			
0.0 - 20.0	4	3(15%)	1(6%) TO 4(21%)
20.0 - 25.0	1	-2(-10%)	-2(-10%) TO -2(-10%)
25.0 - 35.0	4	1(8%)	-4(-13%) TO 8(30%)
35.0 - 50.0	2	-4(-10%)	-12(-33%) TO 5(14%)
50.0 - 70.0	1	34(49%)	34(49%) TO 34(49%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	12	4(13%)	-12(-33%) TO 34(49%)
ANNUAL			
0.0 - 20.0	7	5(28%)	1(6%) TO 10(63%)
20.0 - 25.0	3	-1(-3%)	-2(-10%) TO 1(5%)
25.0 - 35.0	9	2(6%)	-4(-13%) TO 8(30%)
35.0 - 50.0	7	2(5%)	-12(-33%) TO 9(23%)
50.0 - 70.0	3	-7(-11%)	-36(-59%) TO 34(49%)
70.0 - 0.0	1	7(6%)	7(6%) TO 7(6%)
TOTAL	30	2(5%)	-36(-59%) TO 34(63%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A06-A07 TURB

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	6	0.3(7%)	-0.9(-29%) TO 1.0(20%)
5.0 - 20.0	1	1.6(12%)	1.6(12%) TO 1.6(12%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	7	0.4(9%)	-0.9(-29%) TO 1.6(20%)
SUMMER			
0.0 - 1.0	3	0.0(4%)	0.0(0%) TO 0.1(20%)
1.0 - 5.0	2	0.6(12%)	0.0(0%) TO 0.8(67%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	0.2(19%)	0.0(0%) TO 0.8(67%)
FALL			
0.0 - 1.0	4	0.0(11%)	-0.1(-25%) TO 0.2(67%)
1.0 - 5.0	1	-0.2(-17%)	-0.2(-17%) TO -0.2(-17%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	-0.0(-2%)	-0.2(-25%) TO 0.2(67%)
WINTER			
0.0 - 1.0	3	0.1(25%)	0.1(20%) TO 0.1(33%)
1.0 - 5.0	6	0.3(14%)	-1.3(-54%) TO 1.4(83%)
5.0 - 20.0	3	1.0(33%)	0.2(4%) TO 3.9(71%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	12	0.6(24%)	-1.3(-54%) TO 3.9(83%)
ANNUAL			
0.0 - 1.0	10	0.1(11%)	-0.1(-25%) TO 0.2(67%)
1.0 - 5.0	15	0.3(10%)	-1.3(-54%) TO 1.4(83%)
5.0 - 20.0	4	1.7(24%)	0.2(4%) TO 3.9(71%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	29	0.4(15%)	-1.3(-54%) TO 3.9(83%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A06-A07 TOTRES — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 45.0	1	5(12%)	5(12%) TO 5(12%)
45.0 - 55.0	3	-1(-1%)	-4(-8%) TO 3(6%)
55.0 - 65.0	2	1(1%)	-1(-2%) TO 2(4%)
65.0 - 75.0	1	6(8%)	6(8%) TO 6(8%)
75.0 -105.0	1	-16(-21%)	-16(-21%) TO -16(-21%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	8	-1(-1%)	-16(-21%) TO 6(12%)
SUMMER			
0.0 - 45.0	2	2(4%)	1(3%) TO 2(5%)
45.0 - 55.0	1	-4(-8%)	-4(-8%) TO -4(-8%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	-0(-1%)	-4(-8%) TO 2(5%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	2	4(8%)	-2(-4%) TO 10(19%)
55.0 - 65.0	1	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	2	-6(-8%)	-10(-15%) TO -1(-1%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	-1(-1%)	-10(-15%) TO 10(19%)
WINTER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	1	1(2%)	1(2%) TO 1(2%)
55.0 - 65.0	7	0(0%)	-9(-14%) TO 12(19%)
65.0 - 75.0	2	68(98%)	16(24%) TO 119(165%)
75.0 -105.0	1	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	11	12(19%)	-9(-14%) TO 119(165%)
ANNUAL			
0.0 - 45.0	3	3(7%)	1(3%) TO 5(12%)
45.0 - 55.0	7	0(1%)	-4(-8%) TO 10(19%)
55.0 - 65.0	10	0(0%)	-9(-14%) TO 12(19%)
65.0 - 75.0	5	26(37%)	-10(-15%) TO 119(165%)
75.0 -105.0	2	-8(-10%)	-16(-21%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	27	5(8%)	-16(-21%) TO 119(165%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A06-A07 TOTNFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.0	1	-1(-20%)	-1(-20%) TO -1(-20%)
5.0 - 10.0	3	2(24%)	-3(-38%) TO 9(150%)
10.0 - 20.0	2	4(33%)	1(7%) TO 6(38%)
20.0 -100.0	1	5(13%)	5(13%) TO 5(13%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	7	2(17%)	-3(-38%) TO 9(150%)
SUMMER			
0.0 - 5.0	3	1(40%)	1(33%) TO 1(50%)
5.0 - 10.0	1	-5(-83%)	-5(-83%) TO -5(-83%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	-1(-27%)	-5(-83%) TO 1(50%)
FALL			
0.0 - 5.0	1	11(550%)	11(550%) TO 11(550%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	1	-15(-83%)	-15(-83%) TO -15(-83%)
20.0 -100.0	1	-1(-4%)	-1(-4%) TO -1(-4%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	-2(-12%)	-15(-83%) TO 11(550%)
WINTER			
0.0 - 5.0	3	3(75%)	-4(-80%) TO 14(280%)
5.0 - 10.0	2	9(90%)	0(0%) TO 18(180%)
10.0 - 20.0	2	-6(-50%)	-7(-64%) TO -5(-38%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	7	2(27%)	-7(-80%) TO 18(280%)
ANNUAL			
0.0 - 5.0	7	3(88%)	-4(-80%) TO 14(550%)
5.0 - 10.0	6	3(38%)	-5(-83%) TO 18(180%)
10.0 - 20.0	5	-4(-28%)	-15(-83%) TO 6(38%)
20.0 -100.0	2	2(6%)	-1(-4%) TO 5(13%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	20	1(11%)	-15(-83%) TO 18(550%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A06-A07 TOTFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	3	-0(-1%)	-4(-11%) TO 2(6%)
35.0 - 49.0	3	2(4%)	-4(-10%) TO 12(28%)
49.0 - 59.0	1	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	1	-13(-19%)	-13(-19%) TO -13(-19%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	8	-1(-3%)	-13(-19%) TO 12(28%)
SUMMER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	3	1(2%)	0(0%) TO 1(3%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	1(2%)	0(0%) TO 1(3%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	1	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	3	-2(-4%)	-11(-19%) TO 5(10%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	4	-2(-3%)	-11(-19%) TO 5(10%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	1	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	7	0(0%)	-4(-7%) TO 4(7%)
59.0 - 69.0	1	3(5%)	3(5%) TO 3(5%)
69.0 - 85.0	1	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	10	0(1%)	-4(-7%) TO 4(7%)
ANNUAL			
0.0 - 35.0	3	-0(-1%)	-4(-11%) TO 2(6%)
35.0 - 49.0	8	1(2%)	-4(-10%) TO 12(28%)
49.0 - 59.0	11	-0(-1%)	-11(-19%) TO 5(10%)
59.0 - 69.0	2	-5(-8%)	-13(-19%) TO 3(5%)
69.0 - 85.0	1	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	25	-0(-1%)	-13(-19%) TO 12(28%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A06-A07 SP_COND — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	7	-3(-9%)	-29(-39%) TO 2(9%)
TOTAL	7	-3(-9%)	-29(-39%) TO 2(9%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	5	0(1%)	-1(-3%) TO 1(4%)
TOTAL	5	0(1%)	-1(-3%) TO 1(4%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	3	-1(-1%)	-2(-3%) TO 1(2%)
TOTAL	3	-1(-1%)	-2(-3%) TO 1(2%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	12	1(2%)	-13(-17%) TO 8(13%)
TOTAL	12	1(2%)	-13(-17%) TO 8(13%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	27	-0(-1%)	-29(-39%) TO 8(13%)
TOTAL	27	-0(-1%)	-29(-39%) TO 8(13%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A64-A69 NO2NO3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	2	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	5	-12(-32%)	-20(-50%) TO	-10(-20%)	-20(-52%)	-29(-97%) TO	-10(-20%)
50.0 -150.0	2	-45(-60%)	-80(-71%) TO	-40(-50%)	-55(-73%)	-69(-99%) TO	-40(-50%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	9	-17(-39%)	-50(-71%) TO	0(0%)	-23(-61%)	-69(-99%) TO	0(0%)
SUMMER							
0.0 - 20.0	3	0(0%)	0(0%) TO	0(0%)	-6(-46%)	-19(-95%) TO	0(0%)
20.0 - 50.0	2	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	0(0%)	0(0%) TO	0(0%)	-4(-17%)	-19(-95%) TO	0(0%)
FALL							
0.0 - 20.0	1	10(50%)	10(50%) TO	10(50%)	10(50%)	10(50%) TO	10(50%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	2	-80(-76%)	-80(-80%) TO	-80(-73%)	-80(-76%)	-80(-80%) TO	-80(-73%)
150.0 -300.0	2	-180(-78%)	-240(-80%) TO	-120(-75%)	-180(-78%)	-240(-80%) TO	-120(-75%)
300.0 -500.0	2	-300(-88%)	-320(-89%) TO	-280(-88%)	-300(-88%)	-320(-89%) TO	-280(-88%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	7	-159(-81%)	-320(-89%) TO	10(50%)	-159(-81%)	-320(-89%) TO	10(50%)
WINTER							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	5	-68(-63%)	-100(-71%) TO	-30(-38%)	-68(-63%)	-100(-71%) TO	-30(-38%)
150.0 -300.0	8	-153(-67%)	-190(-79%) TO	-120(-48%)	-153(-67%)	-190(-79%) TO	-120(-48%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	13	-120(-66%)	-190(-79%) TO	-30(-38%)	-120(-66%)	-190(-79%) TO	-30(-38%)
ANNUAL							
0.0 - 20.0	6	2(8%)	0(0%) TO	10(50%)	-2(-14%)	-19(-95%) TO	10(50%)
20.0 - 50.0	7	-9(-23%)	-20(-50%) TO	0(0%)	-14(-38%)	-29(-97%) TO	0(0%)
50.0 -150.0	9	-66(-66%)	-100(-80%) TO	-30(-38%)	-68(-68%)	-100(-99%) TO	-30(-38%)
150.0 -300.0	10	-158(-70%)	-240(-80%) TO	-120(-48%)	-158(-70%)	-240(-80%) TO	-120(-48%)
300.0 -500.0	2	-300(-88%)	-320(-89%) TO	-280(-88%)	-300(-88%)	-320(-89%) TO	-280(-88%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	34	-83(-67%)	-320(-89%) TO	10(50%)	-88(-69%)	-320(-99%) TO	10(50%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A04-A09 NN)

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	9	1(6%)	0(0%) TO 10(50%)	5(171%)	0(0%) TO 19(1900%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	9	1(6%)	0(0%) TO 10(50%)	5(171%)	0(0%) TO 19(1900%)
SUMMER					
0.0 - 20.0	4	3(13%)	0(0%) TO 10(50%)	7(69%)	0(0%) TO 19(1900%)
20.0 - 50.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	2(8%)	0(0%) TO 10(50%)	4(35%)	0(0%) TO 19(1900%)
FALL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	3	-10(-25%)	-20(-50%) TO 0(0%)	-33(-57%)	-39(-98%) TO 0(0%)
50.0 -100.0	4	-38(-56%)	-60(-75%) TO -10(-17%)	-47(-70%)	-79(-99%) TO -10(-17%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	7	-26(-46%)	-60(-75%) TO 0(0%)	-37(-66%)	-79(-99%) TO 0(0%)
WINTER					
0.0 - 20.0	9	0(0%)	0(0%) TO 0(0%)	-6(-55%)	-19(-95%) TO 0(0%)
20.0 - 50.0	4	-10(-27%)	-20(-40%) TO 0(0%)	-15(-39%)	-29(-97%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	13	-3(-12%)	-20(-40%) TO 0(0%)	-9(-46%)	-29(-97%) TO 0(0%)
ANNUAL					
0.0 - 20.0	22	1(5%)	0(0%) TO 10(50%)	1(11%)	-19(-95%) TO 19(1900%)
20.0 - 50.0	8	-9(-23%)	-20(-50%) TO 0(0%)	-16(-41%)	-39(-98%) TO 0(0%)
50.0 -100.0	4	-38(-56%)	-60(-75%) TO -10(-17%)	-47(-70%)	-79(-99%) TO -10(-17%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	34	-6(-20%)	-60(-75%) TO 10(50%)	-9(-39%)	-79(-99%) TO 19(1900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A04-A09 PTOT INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	1	4(16%)	4(16%) TO 4(16%)
25.0 - 35.0	1	-2(-8%)	-2(-8%) TO -2(-8%)
35.0 - 50.0	3	-7(-15%)	-12(-27%) TO -3(-6%)
50.0 - 70.0	3	-6(-12%)	-10(-17%) TO -4(-8%)
70.0 - 0.0	1	-5(-5%)	-5(-5%) TO -5(-5%)
TOTAL	9	-5(-9%)	-13(-27%) TO 4(16%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	3	2(7%)	-1(-3%) TO 5(15%)
35.0 - 50.0	2	-3(-7%)	-7(-14%) TO 1(3%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	0(1%)	-7(-14%) TO 5(15%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	1	-3(-9%)	-3(-9%) TO -3(-9%)
35.0 - 50.0	4	-7(-15%)	-12(-31%) TO 1(2%)
50.0 - 70.0	2	-18(-31%)	-18(-32%) TO -17(-29%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	7	-9(-20%)	-18(-32%) TO 1(2%)
WINTER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	2	4(15%)	0(0%) TO 7(29%)
25.0 - 35.0	4	-3(-10%)	-7(-21%) TO 2(7%)
35.0 - 50.0	4	-7(-19%)	-17(-45%) TO 6(17%)
50.0 - 70.0	2	11(20%)	-35(-66%) TO 57(98%)
70.0 - 0.0	1	-196(-47%)	-196(-47%) TO -196(-47%)
TOTAL	13	-16(-24%)	-196(-66%) TO 57(98%)
ANNUAL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	3	4(15%)	0(0%) TO 7(29%)
25.0 - 35.0	9	-1(-4%)	-7(-21%) TO 5(15%)
35.0 - 50.0	13	-6(-15%)	-17(-45%) TO 6(17%)
50.0 - 70.0	7	-9(-8%)	-35(-66%) TO 57(98%)
70.0 - 0.0	2	-101(-38%)	-196(-47%) TO -5(-5%)
TOTAL	34	-9(-17%)	-196(-66%) TO 57(98%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A04-A09 TURB INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	4	-0.1(-4%)	-1.6(-40%) TO 1.0(63%)
5.0 - 20.0	5	-0.4(-5%)	-1.1(-20%) TO 0.1(2%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	9	-0.2(-5%)	-1.6(-40%) TO 1.0(63%)
SUMMER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	5	0.3(13%)	-0.1(-8%) TO 0.6(30%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	0.3(13%)	-0.1(-8%) TO 0.6(30%)
FALL			
0.0 - 1.0	1	0.3(38%)	0.3(38%) TO 0.3(38%)
1.0 - 5.0	4	-0.5(-24%)	-1.6(-50%) TO 0.1(8%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	-0.3(-18%)	-1.6(-50%) TO 0.3(38%)
WINTER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	12	0.2(8%)	-1.1(-48%) TO 2.3(53%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	1	-162.0(-73%)	-162.0(-73%) TO -162.0(-73%)
TOTAL	13	-12.3(-63%)	-162.0(-73%) TO 2.3(53%)
ANNUAL			
0.0 - 1.0	1	0.3(38%)	0.3(38%) TO 0.3(38%)
1.0 - 5.0	25	0.1(3%)	-1.6(-50%) TO 2.3(63%)
5.0 - 20.0	5	-0.4(-5%)	-1.1(-20%) TO 0.1(2%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	1	-162.0(-73%)	-162.0(-73%) TO -162.0(-73%)
TOTAL	32	-5.1(-51%)	-162.0(-73%) TO 2.3(63%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A04-A09 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE		K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	
SPRING							
0.0 -200.0	9	0(0%)	0(0%) TO	0(0%)	36(64%)	-180(-90%) TO	180(900%)
200.0 -300.0	1	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	3	-133(-33%)	-200(-50%) TO	0(0%)	-253(-63%)	-380(-95%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	9	-44(-16%)	-200(-50%) TO	0(0%)	-64(-33%)	-380(-95%) TO	180(900%)
SUMMER							
0.0 -200.0	3	33(17%)	0(0%) TO	100(50%)	33(42%)	0(0%) TO	100(50%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	1	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	1	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	20(7%)	0(0%) TO	100(50%)	20(9%)	0(0%) TO	100(50%)
FALL							
0.0 -200.0	6	0(0%)	0(0%) TO	0(0%)	30(38%)	0(0%) TO	180(900%)
200.0 -300.0	1	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	26(23%)	0(0%) TO	180(900%)
TOTAL	7	0(0%)	0(0%) TO	0(0%)			
WINTER							
0.0 -200.0	11	0(0%)	0(0%) TO	0(0%)	-16(-45%)	-180(-90%) TO	0(0%)
200.0 -300.0	1	100(33%)	100(33%) TO	100(33%)	100(33%)	100(33%) TO	100(33%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	1	-400(-50%)	-400(-50%) TO	-400(-50%)	-400(-50%)	-400(-50%) TO	-400(-50%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	13	-23(-9%)	-400(-50%) TO	100(33%)	-37(-32%)	-400(-90%) TO	100(33%)
ANNUAL							
0.0 -200.0	25	4(2%)	0(0%) TO	100(50%)	11(20%)	-180(-90%) TO	180(900%)
200.0 -300.0	3	33(11%)	0(0%) TO	100(33%)	33(11%)	0(0%) TO	100(33%)
300.0 -400.0	4	-100(-25%)	-200(-50%) TO	0(0%)	-190(-48%)	-380(-95%) TO	0(0%)
400.0 -900.0	2	-200(-31%)	-400(-50%) TO	0(0%)	-200(-31%)	-400(-50%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	34	-18(-7%)	-400(-50%) TO	100(50%)	-23(-15%)	-400(-95%) TO	180(900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A04-A09 TOTRES — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE	
SPRING				
0.0 - 45.0	0	0(0%)	0(0%) TO	0(0%)
45.0 - 55.0	5	-4(-8%)	-11(-20%) TO	4(9%)
55.0 - 65.0	2	-7(-11%)	-7(-12%) TO	-6(-9%)
65.0 - 75.0	1	-15(-22%)	-15(-22%) TO	-15(-22%)
75.0 -105.0	1	-3(-3%)	-3(-3%) TO	-3(-3%)
105.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	9	-6(-10%)	-15(-22%) TO	4(9%)
SUMMER				
0.0 - 45.0	2	0(0%)	-1(-2%) TO	1(2%)
45.0 - 55.0	1	-2(-4%)	-2(-4%) TO	-2(-4%)
55.0 - 65.0	0	0(0%)	0(0%) TO	0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO	0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO	0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	3	-1(-2%)	-2(-4%) TO	1(2%)
FALL				
0.0 - 45.0	0	0(0%)	0(0%) TO	0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO	0(0%)
55.0 - 65.0	1	0(0%)	0(0%) TO	0(0%)
65.0 - 75.0	2	-16(-22%)	-22(-31%) TO	-9(-13%)
75.0 -105.0	0	0(0%)	0(0%) TO	0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	3	-10(-15%)	-22(-31%) TO	0(0%)
WINTER				
0.0 - 45.0	0	0(0%)	0(0%) TO	0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO	0(0%)
55.0 - 65.0	3	-2(-3%)	-21(-33%) TO	17(27%)
65.0 - 75.0	5	-4(-5%)	-10(-14%) TO	4(6%)
75.0 -105.0	3	-23(-28%)	-32(-39%) TO	-11(-14%)
105.0 - 0.0	1	-1453(-96%)	-1453(-96%) TO	-1453(-96%)
TOTAL	12	-129(-67%)	-1453(-96%) TO	17(27%)
ANNUAL				
0.0 - 45.0	2	0(0%)	-1(-2%) TO	1(2%)
45.0 - 55.0	6	-4(-7%)	-11(-20%) TO	4(9%)
55.0 - 65.0	6	-3(-5%)	-21(-33%) TO	17(27%)
65.0 - 75.0	8	-8(-12%)	-22(-31%) TO	4(6%)
75.0 -105.0	4	-18(-22%)	-32(-39%) TO	-3(-3%)
105.0 - 0.0	1	-1453(-96%)	-1453(-96%) TO	-1453(-96%)
TOTAL	27	-60(-52%)	-1453(-96%) TO	17(27%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A04-A09 TOTNFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE	
SPRING				
0.0 - 5.0	0	0(0%)	0(0%) TO	0(0%)
5.0 - 10.0	2	1(14%)	-4(-57%) TO	6(86%)
10.0 - 20.0	4	-4(-26%)	-14(-78%) TO	4(36%)
20.0 -100.0	1	-6(-12%)	-6(-12%) TO	-6(-12%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	7	-3(-16%)	-14(-78%) TO	6(86%)
SUMMER				
0.0 - 5.0	2	0(0%)	0(0%) TO	0(0%)
5.0 - 10.0	1	-1(-17%)	-1(-17%) TO	-1(-17%)
10.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	3	-0(-8%)	-1(-17%) TO	0(0%)
FALL				
0.0 - 5.0	0	0(0%)	0(0%) TO	0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO	0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)
WINTER				
0.0 - 5.0	3	4(109%)	3(60%) TO	6(200%)
5.0 - 10.0	0	0(0%)	0(0%) TO	0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)
20.0 -100.0	1	-14(-61%)	-14(-61%) TO	-14(-61%)
100.0 - 0.0	1	-1449(-100%)	-1449(-100%) TO	-1449(-100%)
TOTAL	5	-290(-98%)	-1449(-100%) TO	6(200%)
ANNUAL				
0.0 - 5.0	5	2(67%)	0(0%) TO	6(200%)
5.0 - 10.0	3	0(5%)	-4(-57%) TO	6(86%)
10.0 - 20.0	4	-4(-26%)	-14(-78%) TO	4(36%)
20.0 -100.0	2	-10(-27%)	-14(-61%) TO	-6(-12%)
100.0 - 0.0	1	-1449(-100%)	-1449(-100%) TO	-1449(-100%)
TOTAL	15	-98(-91%)	-1449(-100%) TO	6(200%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A04-A09 TOTFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	3	-1(-4%)	-4(-11%) TO 3(9%)
35.0 - 49.0	3	-1(-3%)	-4(-11%) TO 3(8%)
49.0 - 59.0	3	1(1%)	-2(-4%) TO 4(8%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	9	-1(-1%)	-4(-11%) TO 4(9%)
SUMMER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	3	-0(-1%)	-2(-4%) TO 1(3%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	-0(-1%)	-2(-4%) TO 1(3%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	1	13(27%)	13(27%) TO 13(27%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	1	1(2%)	1(2%) TO 1(2%)
69.0 - 85.0	1	-19(-25%)	-19(-25%) TO -19(-25%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	-2(-3%)	-19(-25%) TO 13(27%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	1	3(5%)	3(5%) TO 3(5%)
59.0 - 69.0	10	-5(-7%)	-8(-13%) TO 1(2%)
69.0 - 85.0	1	-28(-37%)	-28(-37%) TO -28(-37%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	12	-6(-9%)	-28(-37%) TO 3(5%)
ANNUAL			
0.0 - 35.0	3	-1(-4%)	-4(-11%) TO 3(9%)
35.0 - 49.0	7	1(3%)	-4(-11%) TO 13(27%)
49.0 - 59.0	4	1(2%)	-2(-4%) TO 4(8%)
59.0 - 69.0	11	-4(-6%)	-8(-13%) TO 1(2%)
69.0 - 85.0	2	-24(-31%)	-28(-37%) TO -19(-25%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	27	-3(-4%)	-28(-37%) TO 13(27%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

A04-A09 SP_COND — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	9	-1(-2%)	-5(-9%) TO 2(5%)
TOTAL	9	-1(-2%)	-5(-9%) TO 2(5%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	5	0(1%)	-1(-3%) TO 1(3%)
TOTAL	5	0(1%)	-1(-3%) TO 1(3%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	3	-4(-6%)	-6(-8%) TO -3(-4%)
TOTAL	3	-4(-6%)	-6(-8%) TO -3(-4%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	13	-7(-10%)	-25(-26%) TO 6(12%)
TOTAL	13	-7(-10%)	-25(-26%) TO 6(12%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	30	-4(-7%)	-25(-26%) TO 6(12%)
TOTAL	30	-4(-7%)	-25(-26%) TO 6(12%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

B08-B04 NO2NO3) ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
SUMMER					
0.0 - 20.0	2	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	2	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
ANNUAL					
0.0 - 20.0	5	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

BOO-B04 NH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	3	0(0%)	0(0%) TO 0(0%)	-6(-86%)	-19(-95%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	3	0(0%)	0(0%) TO 0(0%)	-6(-86%)	-19(-95%) TO 0(0%)
SUMMER					
0.0 - 20.0	1	0(0%)	0(0%) TO 0(0%)	-19(-95%)	-19(-95%) TO -19(-95%)
20.0 - 50.0	1	-30(-60%)	-30(-60%) TO -30(-60%)	-49(-98%)	-49(-98%) TO -49(-98%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	2	-15(-43%)	-30(-60%) TO 0(0%)	-34(-97%)	-49(-98%) TO -19(-95%)
FALL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
ANNUAL					
0.0 - 20.0	4	0(0%)	0(0%) TO 0(0%)	-10(-90%)	-19(-95%) TO 0(0%)
20.0 - 50.0	1	-30(-60%)	-30(-60%) TO -30(-60%)	-49(-98%)	-49(-98%) TO -49(-98%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	-6(-23%)	-30(-60%) TO 0(0%)	-17(-95%)	-49(-98%) TO 0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

B00-B04 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE		K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	
SPRING							
0.0 -200.0	2	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	1	-100(-17%)	-100(-17%) TO	-100(-17%)	-100(-17%)	-100(-17%) TO	-100(-17%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	3	-33(-10%)	-100(-17%) TO	0(0%)	-33(-16%)	-100(-17%) TO	0(0%)
SUMMER							
0.0 -200.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	2	-200(-36%)	-300(-60%) TO	-100(-17%)	-200(-36%)	-300(-60%) TO	-100(-17%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	2	-200(-36%)	-300(-60%) TO	-100(-17%)	-200(-36%)	-300(-60%) TO	-100(-17%)
FALL							
0.0 -200.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 -200.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
ANNUAL							
0.0 -200.0	2	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	3	-167(-29%)	-300(-60%) TO	-100(-17%)	-167(-29%)	-300(-60%) TO	-100(-17%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	-100(-24%)	-300(-60%) TO	0(0%)	-100(-29%)	-300(-60%) TO	0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

800-804 PTOT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	1	12(50%)	12(50%) TO 12(50%)
25.0 - 35.0	1	8(31%)	8(31%) TO 8(31%)
35.0 - 50.0	1	5(14%)	5(14%) TO 5(14%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	8(29%)	5(14%) TO 12(50%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	1	1(4%)	1(4%) TO 1(4%)
25.0 - 35.0	1	-2(-8%)	-2(-8%) TO -2(-8%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	-1(-2%)	-2(-8%) TO 1(4%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	2	7(28%)	1(4%) TO 12(50%)
25.0 - 35.0	2	3(12%)	-2(-8%) TO 8(31%)
35.0 - 50.0	1	5(14%)	5(14%) TO 5(14%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	5(18%)	-2(-8%) TO 12(50%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

800-804 TURB

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	1	2.0(222%)	2.0(222%) TO 2.0(222%)
1.0 - 5.0	2	1.4(61%)	1.3(52%) TO 1.5(76%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	3	1.6(87%)	1.3(52%) TO 2.0(222%)
SUMMER			
0.0 - 1.0	2	0.3(36%)	0.2(25%) TO 0.3(50%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	0.3(36%)	0.2(25%) TO 0.3(50%)
FALL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 1.0	3	0.8(109%)	0.2(25%) TO 2.0(222%)
1.0 - 5.0	2	1.4(61%)	1.3(52%) TO 1.5(76%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	1.1(77%)	0.2(25%) TO 2.0(222%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

800-804 TOTRES — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 45.0	3	3(8%)	2(5%) TO 5(15%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	3(8%)	2(5%) TO 5(15%)
SUMMER			
0.0 - 45.0	1	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 45.0	4	2(6%)	0(0%) TO 5(15%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	4	2(6%)	0(0%) TO 5(15%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

800-804 TOTNFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.0	1	9(900%)	9(900%) TO 9(900%)
5.0 - 10.0	1	1(14%)	1(14%) TO 1(14%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	5(125%)	1(14%) TO 9(900%)
SUMMER			
0.0 - 5.0	1	-1(-50%)	-1(-50%) TO -1(-50%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	-1(-50%)	-1(-50%) TO -1(-50%)
FALL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 5.0	2	4(267%)	-1(-50%) TO 9(900%)
5.0 - 10.0	1	1(14%)	1(14%) TO 1(14%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	3(90%)	-1(-50%) TO 9(900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

B00-B04 TOTFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	3	3(8%)	-4(-12%) TO 11(32%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	3(8%)	-4(-12%) TO 11(32%)
SUMMER			
0.0 - 35.0	1	1(3%)	1(3%) TO 1(3%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	1(3%)	1(3%) TO 1(3%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 35.0	4	2(7%)	-4(-12%) TO 11(32%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	4	2(7%)	-4(-12%) TO 11(32%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

B00-B04 SP_COND ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	3	0(1%)	-1(-5%) TO 2(8%)
TOTAL	3	0(1%)	-1(-5%) TO 2(8%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	2	1(2%)	0(0%) TO 1(3%)
TOTAL	2	1(2%)	0(0%) TO 1(3%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	5	0(2%)	-1(-5%) TO 2(8%)
TOTAL	5	0(2%)	-1(-5%) TO 2(8%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

B00-B04 TOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.9	2	1.3(87%)	0.7(44%) TO 1.9(136%)
2.9 - 3.9	1	0.6(18%)	0.6(18%) TO 0.6(18%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	3	1.1(51%)	0.6(18%) TO 1.9(136%)
SUMMER			
0.0 - 2.9	2	0.1(4%)	-0.6(-21%) TO 0.8(33%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	0.1(4%)	-0.6(-21%) TO 0.8(33%)
FALL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 2.9	4	0.7(34%)	-0.6(-21%) TO 1.9(136%)
2.9 - 3.9	1	0.6(18%)	0.6(18%) TO 0.6(18%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	0.7(30%)	-0.6(-21%) TO 1.9(136%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

B00-B04 POC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
SUMMER			
0.0 - 0.5	1	0.2(40%)	0.2(40%) TO 0.2(40%)
0.5 - 0.9	1	-0.4(-57%)	-0.4(-57%) TO -0.4(-57%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	-0.1(-17%)	-0.4(-57%) TO 0.2(40%)
FALL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 0.5	1	0.2(40%)	0.2(40%) TO 0.2(40%)
0.5 - 0.9	1	-0.4(-57%)	-0.4(-57%) TO -0.4(-57%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	-0.1(-17%)	-0.4(-57%) TO 0.2(40%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

BOD-BOD DOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.5	1	0.6(24%)	0.6(24%) TO 0.6(24%)
2.5 - 3.0	1	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	1	-1.0(-27%)	-1.0(-27%) TO -1.0(-27%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	3	-0.1(-4%)	-1.0(-27%) TO 0.6(24%)
SUMMER			
0.0 - 2.5	2	0.2(10%)	-0.2(-10%) TO 0.6(32%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	0.2(10%)	-0.2(-10%) TO 0.6(32%)
FALL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 2.5	3	0.3(15%)	-0.2(-10%) TO 0.6(32%)
2.5 - 3.0	1	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	1	-1.0(-27%)	-1.0(-27%) TO -1.0(-27%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	0.0(0%)	-1.0(-27%) TO 0.6(32%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C00-C06 NO2NO3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	9	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	2	-15(-38%)	-30(-60%) TO	0(0%)	-25(-61%)	-49(-98%) TO	0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	11	-3(-12%)	-30(-60%) TO	0(0%)	-4(-55%)	-49(-98%) TO	0(0%)
SUMMER							
0.0 - 20.0	6	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	1	-20(-50%)	-20(-50%) TO	-20(-50%)	-39(-98%)	-39(-98%) TO	-39(-98%)
50.0 -150.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	7	-3(-12%)	-20(-50%) TO	0(0%)	-6(-85%)	-39(-98%) TO	0(0%)
FALL							
0.0 - 20.0	7	4(21%)	0(0%) TO	30(150%)	4(115%)	-19(-95%) TO	49(4900%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	1	-140(-42%)	-140(-42%) TO	-140(-42%)	-140(-42%)	-140(-42%) TO	-140(-42%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	8	-14(-23%)	-140(-42%) TO	30(150%)	-14(-31%)	-140(-95%) TO	49(4900%)
WINTER							
0.0 - 20.0	10	2(10%)	0(0%) TO	10(50%)	4(121%)	0(0%) TO	29(2900%)
20.0 - 50.0	1	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	3	17(20%)	10(8%) TO	30(50%)	17(20%)	10(8%) TO	30(50%)
150.0 -300.0	1	-110(-44%)	-110(-44%) TO	-110(-44%)	-110(-44%)	-110(-44%) TO	-110(-44%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	1	-450(-88%)	-450(-88%) TO	-450(-88%)	-450(-88%)	-450(-88%) TO	-450(-88%)
TOTAL	16	-31(-40%)	-450(-88%) TO	30(50%)	-28(-42%)	-450(-88%) TO	30(2900%)
ANNUAL							
0.0 - 20.0	32	2(8%)	0(0%) TO	30(150%)	3(99%)	-19(-95%) TO	49(4900%)
20.0 - 50.0	4	-13(-33%)	-30(-60%) TO	0(0%)	-22(-59%)	-49(-98%) TO	0(0%)
50.0 -150.0	3	17(20%)	10(8%) TO	30(50%)	17(20%)	10(8%) TO	30(50%)
150.0 -300.0	1	-110(-44%)	-110(-44%) TO	-110(-44%)	-110(-44%)	-110(-44%) TO	-110(-44%)
300.0 -500.0	1	-140(-42%)	-140(-42%) TO	-140(-42%)	-140(-42%)	-140(-42%) TO	-140(-42%)
500.0 - 0.0	1	-450(-88%)	-450(-88%) TO	-450(-88%)	-450(-88%)	-450(-88%) TO	-450(-88%)
TOTAL	42	-15(-31%)	-450(-88%) TO	30(1804)	-18(-41%)	-450(-98%) TO	49(4900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C00-C06 MM3 — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	9	0(0%)	0(0%) TO	0(0%)	2(211%)	0(0%) TO	19(1900%)
20.0 - 50.0	2	-10(-33%)	-10(-33%) TO	-10(-33%)	-10(-33%)	-10(-33%) TO	-10(-33%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	11	-2(-8%)	-10(-33%) TO	0(0%)	-0(-1%)	-10(-33%) TO	19(1900%)
SUMMER							
0.0 - 20.0	4	8(38%)	0(0%) TO	10(50%)	17(296%)	0(0%) TO	29(2900%)
20.0 - 50.0	2	-5(-13%)	-20(-50%) TO	10(25%)	-5(-13%)	-20(-50%) TO	10(25%)
50.0 -100.0	1	-20(-33%)	-20(-33%) TO	-20(-33%)	-20(-33%)	-20(-33%) TO	-20(-33%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	7	0(0%)	-20(-50%) TO	10(50%)	5(23%)	-20(-50%) TO	29(2900%)
FALL							
0.0 - 20.0	5	9(40%)	0(0%) TO	20(100%)	12(246%)	0(0%) TO	39(3900%)
20.0 - 50.0	2	0(0%)	-20(-50%) TO	20(67%)	-10(-27%)	-39(-98%) TO	20(67%)
50.0 -100.0	1	-40(-44%)	-40(-44%) TO	-40(-44%)	-40(-44%)	-40(-44%) TO	-40(-44%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	8	0(0%)	-40(-50%) TO	20(100%)	0(0%)	-40(-98%) TO	39(3900%)
WINTER							
0.0 - 20.0	11	6(32%)	0(0%) TO	20(100%)	17(271%)	0(0%) TO	39(3900%)
20.0 - 50.0	2	-5(-14%)	-10(-25%) TO	0(0%)	-5(-14%)	-10(-25%) TO	0(0%)
50.0 -100.0	2	-5(-8%)	-30(-43%) TO	20(33%)	-5(-8%)	-30(-43%) TO	20(33%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	15	3(12%)	-30(-43%) TO	20(100%)	11(61%)	-30(-43%) TO	39(3900%)
ANNUAL							
0.0 - 20.0	29	5(24%)	0(0%) TO	20(100%)	11(266%)	0(0%) TO	39(3900%)
20.0 - 50.0	8	-5(-14%)	-20(-50%) TO	20(67%)	-7(-21%)	-39(-98%) TO	20(67%)
50.0 -100.0	4	-18(-25%)	-40(-44%) TO	20(33%)	-18(-25%)	-40(-44%) TO	20(33%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	41	1(3%)	-40(-50%) TO	20(100%)	5(29%)	-40(-98%) TO	39(3900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C06-C06 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE
SPRING					
0.0 -200.0	7	29(14%)	0(0%) TO 100(50%)	106(231%)	0(0%) TO 280(1400%)
200.0 -300.0	1	100(33%)	100(33%) TO 100(33%)	100(33%)	100(33%) TO 100(33%)
300.0 -400.0	1	-100(-25%)	-100(-25%) TO -100(-25%)	-100(-25%)	-100(-25%) TO -100(-25%)
400.0 -900.0	2	0(0%)	-200(-25%) TO 200(25%)	0(0%)	-200(-25%) TO 200(25%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	11	18(5%)	-200(-25%) TO 200(50%)	67(28%)	-200(-25%) TO 280(1400%)
SUMMER					
0.0 -200.0	2	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	2	50(17%)	-100(-33%) TO 200(67%)	50(17%)	-100(-33%) TO 200(67%)
300.0 -400.0	1	400(100%)	400(100%) TO 400(100%)	400(100%)	400(100%) TO 400(100%)
400.0 -900.0	2	-50(-10%)	-300(-60%) TO 200(40%)	-140(-28%)	-480(-96%) TO 200(40%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	7	57(17%)	-300(-60%) TO 400(100%)	31(11%)	-480(-96%) TO 400(100%)
FALL					
0.0 -200.0	7	43(21%)	0(0%) TO 200(100%)	171(857%)	0(0%) TO 380(1900%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	1	200(25%)	200(25%) TO 200(25%)	200(25%)	200(25%) TO 200(25%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	8	63(23%)	0(0%) TO 200(100%)	175(149%)	0(0%) TO 380(1900%)
WINTER					
0.0 -200.0	14	57(29%)	0(0%) TO 200(100%)	147(322%)	0(0%) TO 280(1400%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	1	400(67%)	400(67%) TO 400(67%)	400(67%)	400(67%) TO 400(67%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	16	75(32%)	0(0%) TO 400(100%)	154(150%)	0(0%) TO 400(1400%)
ANNUAL					
0.0 -200.0	30	43(22%)	0(0%) TO 200(100%)	133(351%)	0(0%) TO 380(1900%)
200.0 -300.0	3	67(22%)	-100(-33%) TO 200(67%)	67(22%)	-100(-33%) TO 200(67%)
300.0 -400.0	3	100(25%)	-100(-25%) TO 400(100%)	100(25%)	-100(-25%) TO 400(100%)
400.0 -900.0	6	83(12%)	-300(-60%) TO 400(67%)	53(8%)	-480(-96%) TO 400(67%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	42	55(19%)	-300(-60%) TO 400(100%)	119(67%)	-480(-96%) TO 400(1900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C00-C06 PTOT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	6	8(48%)	-1(-8%) TO 15(107%)
20.0 - 25.0	3	6(30%)	5(23%) TO 9(43%)
25.0 - 35.0	1	20(77%)	20(77%) TO 20(77%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	1	-77(-61%)	-77(-61%) TO -77(-61%)
TOTAL	11	1(3%)	-77(-61%) TO 20(107%)
SUMMER			
0.0 - 20.0	1	8(42%)	8(42%) TO 8(42%)
20.0 - 25.0	2	2(8%)	-2(-8%) TO 6(24%)
25.0 - 35.0	2	10(38%)	8(31%) TO 12(44%)
35.0 - 50.0	1	16(41%)	16(41%) TO 16(41%)
50.0 - 70.0	1	-9(-17%)	-9(-17%) TO -9(-17%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	7	6(18%)	-9(-17%) TO 16(44%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	3	12(50%)	-4(-17%) TO 28(112%)
25.0 - 35.0	4	0(1%)	-8(-25%) TO 17(57%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	1	-30(-11%)	-30(-11%) TO -30(-11%)
TOTAL	8	1(1%)	-30(-25%) TO 28(112%)
WINTER			
0.0 - 20.0	8	12(71%)	-1(-5%) TO 21(162%)
20.0 - 25.0	2	4(16%)	-3(-14%) TO 10(45%)
25.0 - 35.0	3	20(66%)	17(57%) TO 21(72%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	1	8(12%)	8(12%) TO 8(12%)
70.0 - 0.0	2	-6(-4%)	-37(-14%) TO 25(33%)
TOTAL	16	10(23%)	-37(-14%) TO 25(162%)
ANNUAL			
0.0 - 20.0	15	10(60%)	-1(-8%) TO 21(162%)
20.0 - 25.0	10	7(29%)	-4(-17%) TO 28(112%)
25.0 - 35.0	10	10(34%)	-8(-25%) TO 21(77%)
35.0 - 50.0	1	16(41%)	16(41%) TO 16(41%)
50.0 - 70.0	2	-1(-1%)	-9(-17%) TO 8(12%)
70.0 - 0.0	4	-30(-16%)	-77(-61%) TO 25(33%)
TOTAL	42	5(13%)	-77(-61%) TO 28(162%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C00-C06 TURB

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	8	0.5(130%)	0.2(29%) TO 0.9(300%)
1.0 - 5.0	2	-1.1(-42%)	-2.2(-59%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	1	-56.3(-97%)	-56.3(-97%) TO -56.3(-97%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	11	-4.9(-81%)	-56.3(-97%) TO 0.9(300%)
SUMMER			
0.0 - 1.0	5	1.5(385%)	0.8(114%) TO 2.7(700%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	2	-3.2(-49%)	-5.8(-75%) TO -0.5(-10%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	7	0.2(9%)	-5.8(-75%) TO 2.7(700%)
FALL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	5	-0.2(-10%)	-1.0(-53%) TO 1.7(113%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	1	-29.2(-63%)	-29.2(-63%) TO -29.2(-63%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	6	-5.0(-56%)	-29.2(-63%) TO 1.7(113%)
WINTER			
0.0 - 1.0	2	0.5(77%)	-0.2(-20%) TO 1.2(400%)
1.0 - 5.0	9	1.0(44%)	-2.0(-45%) TO 4.8(369%)
5.0 - 20.0	4	-2.1(-33%)	-6.0(-64%) TO 1.6(30%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	1	-152.0(-66%)	-152.0(-66%) TO -152.0(-66%)
TOTAL	16	-9.4(-54%)	-152.0(-66%) TO 4.8(400%)
ANNUAL			
0.0 - 1.0	15	0.9(196%)	-0.2(-20%) TO 2.7(700%)
1.0 - 5.0	16	0.4(18%)	-2.2(-59%) TO 4.8(369%)
5.0 - 20.0	6	-2.8(-38%)	-6.0(-75%) TO 1.6(30%)
20.0 -100.0	2	-42.8(-82%)	-56.3(-97%) TO -29.2(-63%)
100.0 - 0.0	1	-152.0(-66%)	-152.0(-66%) TO -152.0(-66%)
TOTAL	40	-8.8(-57%)	-152.0(-97%) TO 4.8(700%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C00-C06 TOTAES

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 45.0	9	8(26%)	-1(-3%) TO 19(49%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO -96(-76%)
105.0 - 0.0	1	-96(-76%)	-96(-76%) TO 19(49%)
TOTAL	10	-3(-6%)	-96(-76%) TO 19(49%)
SUMMER			
0.0 - 45.0	4	15(47%)	3(9%) TO 26(90%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	4	15(47%)	3(9%) TO 26(90%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	3	14(27%)	2(4%) TO 33(61%)
55.0 - 65.0	1	18(30%)	18(30%) TO 18(30%)
65.0 - 75.0	1	10(15%)	10(15%) TO 10(15%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	1	68(40%)	68(40%) TO 68(40%)
TOTAL	6	23(30%)	2(4%) TO 68(61%)
WINTER			
0.0 - 45.0	3	23(61%)	17(43%) TO 30(91%)
45.0 - 55.0	5	19(39%)	14(30%) TO 27(49%)
55.0 - 65.0	4	19(34%)	12(21%) TO 29(49%)
65.0 - 75.0	1	10(14%)	10(14%) TO 10(14%)
75.0 -105.0	1	-8(-10%)	-8(-10%) TO -8(-10%)
105.0 - 0.0	1	-305(-72%)	-305(-72%) TO -305(-72%)
TOTAL	15	-4(-5%)	-305(-72%) TO 30(91%)
ANNUAL			
0.0 - 45.0	16	13(39%)	-1(-3%) TO 30(91%)
45.0 - 55.0	8	17(34%)	2(4%) TO 33(61%)
55.0 - 65.0	5	19(33%)	12(21%) TO 29(49%)
65.0 - 75.0	2	10(14%)	10(14%) TO 10(15%)
75.0 -105.0	1	-8(-10%)	-8(-10%) TO -8(-10%)
105.0 - 0.0	3	-111(-46%)	-305(-76%) TO 68(40%)
TOTAL	35	3(8%)	-305(-76%) TO 68(91%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C00-C06 TOTNFILT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 5.0	9	1(33%)	-1(-75%) TO 6(250%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	1	-99(-97%)	-99(-97%) TO -99(-97%)
TOTAL	10	-9(-70%)	-99(-97%) TO 6(250%)
SUMMER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	1	-8(-80%)	-8(-80%) TO -8(-80%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	-8(-80%)	-8(-80%) TO -8(-80%)
FALL			
0.0 - 5.0	1	11(550%)	11(550%) TO 11(550%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	1	-3(-20%)	-3(-20%) TO -3(-20%)
20.0 -100.0	1	75(86%)	75(86%) TO 75(86%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	28(80%)	-3(-20%) TO 75(550%)
WINTER			
0.0 - 5.0	4	-0(-7%)	-3(-60%) TO 3(100%)
5.0 - 10.0	3	0(0%)	-4(-57%) TO 7(70%)
10.0 - 20.0	3	-2(-13%)	-16(-80%) TO 15(115%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	1	-314(-84%)	-314(-84%) TO -314(-84%)
TOTAL	11	-29(-70%)	-314(-84%) TO 15(115%)
ANNUAL			
0.0 - 5.0	14	1(44%)	-3(-75%) TO 11(550%)
5.0 - 10.0	4	-2(-24%)	-8(-80%) TO 7(70%)
10.0 - 20.0	4	-2(-15%)	-16(-80%) TO 15(115%)
20.0 -100.0	1	75(86%)	75(86%) TO 75(86%)
100.0 - 0.0	2	-207(-87%)	-314(-97%) TO -99(-84%)
TOTAL	25	-13(-48%)	-314(-97%) TO 75(550%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C06-C06 TOTFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	7	4(16%)	-1(-4%) TO 9(38%)
35.0 - 49.0	3	11(29%)	8(22%) TO 13(36%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	10	6(21%)	-1(-4%) TO 13(38%)
SUMMER			
0.0 - 35.0	2	23(92%)	11(48%) TO 34(131%)
35.0 - 49.0	2	14(31%)	1(2%) TO 27(64%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	4	18(52%)	1(2%) TO 34(131%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	3	18(35%)	13(25%) TO 22(42%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	2	-14(-17%)	-20(-27%) TO -7(-8%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	5(9%)	-20(-27%) TO 22(42%)
WINTER			
0.0 - 35.0	1	17(49%)	17(49%) TO 17(49%)
35.0 - 49.0	7	15(36%)	7(19%) TO 25(54%)
49.0 - 59.0	5	20(35%)	13(24%) TO 33(57%)
59.0 - 69.0	2	1(2%)	-6(-10%) TO 8(13%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	15	15(30%)	-6(-10%) TO 33(57%)
ANNUAL			
0.0 - 35.0	10	9(35%)	-1(-4%) TO 34(131%)
35.0 - 49.0	12	14(33%)	1(2%) TO 27(64%)
49.0 - 59.0	8	19(35%)	13(24%) TO 33(57%)
59.0 - 69.0	2	1(2%)	-6(-10%) TO 8(13%)
69.0 - 85.0	2	-14(-17%)	-20(-27%) TO -7(-8%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	34	11(26%)	-20(-27%) TO 34(131%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C06-C06 SP_COND — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	1	4(51%)	5(44%) TO 7(58%)
12.5 - 15.5	3	5(33%)	2(15%) TO 7(50%)
15.5 - 18.0	2	6(36%)	5(31%) TO 7(41%)
18.0 - 0.0	3	-6(-12%)	-45(-45%) TO 18(90%)
TOTAL	11	2(10%)	-45(-45%) TO 18(90%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	3	10(72%)	9(64%) TO 12(80%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	4	25(95%)	11(58%) TO 31(130%)
TOTAL	7	19(88%)	9(58%) TO 31(130%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	4	21(33%)	-6(-6%) TO 40(80%)
TOTAL	4	21(33%)	-6(-6%) TO 40(80%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	16	22(57%)	4(13%) TO 33(97%)
TOTAL	16	22(57%)	4(13%) TO 33(97%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	3	6(51%)	5(44%) TO 7(58%)
12.5 - 15.5	6	8(53%)	2(15%) TO 12(80%)
15.5 - 18.0	2	6(36%)	5(31%) TO 7(41%)
18.0 - 0.0	27	19(46%)	-45(-45%) TO 40(130%)
TOTAL	38	16(46%)	-45(-45%) TO 40(130%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C00-C06 TOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.9	1	0.1(6%)	0.1(6%) TO 0.1(6%)
2.9 - 3.9	3	0.5(13%)	-0.8(-26%) TO 1.2(32%)
3.9 - 4.9	5	0.5(12%)	0.2(4%) TO 1.2(27%)
4.9 - 5.9	1	-0.2(-4%)	-0.2(-4%) TO -0.2(-4%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	1	-4.9(-63%)	-4.9(-63%) TO -4.9(-63%)
TOTAL	11	-0.1(-2%)	-4.9(-63%) TO 1.2(32%)
SUMMER			
0.0 - 2.9	2	0.2(7%)	-0.1(-3%) TO 0.4(25%)
2.9 - 3.9	3	-0.2(-5%)	-0.3(-10%) TO 0.1(3%)
3.9 - 4.9	2	0.2(3%)	0.0(0%) TO 0.3(7%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	7	0.0(0%)	-0.3(-10%) TO 0.4(25%)
FALL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	4	1.1(25%)	0.5(12%) TO 1.4(32%)
4.9 - 5.9	5	0.3(5%)	-0.4(-8%) TO 0.8(16%)
5.9 - 6.9	1	1.0(17%)	1.0(17%) TO 1.0(17%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	10	0.7(14%)	-0.4(-8%) TO 1.4(32%)
ANNUAL			
0.0 - 2.9	3	0.1(7%)	-0.1(-3%) TO 0.4(25%)
2.9 - 3.9	6	0.2(4%)	-0.8(-26%) TO 1.2(32%)
3.9 - 4.9	11	0.7(15%)	0.0(0%) TO 1.4(32%)
4.9 - 5.9	6	0.2(3%)	-0.4(-8%) TO 0.8(16%)
5.9 - 6.9	1	1.0(17%)	1.0(17%) TO 1.0(17%)
6.9 - 0.0	1	-4.9(-63%)	-4.9(-63%) TO -4.9(-63%)
TOTAL	28	0.2(5%)	-4.9(-63%) TO 1.4(32%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C00-C06 POC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 0.5	2	0.2(50%)	0.0(0%) TO 0.4(100%)
0.5 - 0.9	2	0.4(47%)	0.2(25%) TO 0.5(71%)
0.9 - 1.4	2	0.2(15%)	-0.2(-20%) TO 0.5(50%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	2	-1.0(-38%)	-1.1(-39%) TO -0.8(-36%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	8	-0.1(-5%)	-1.1(-39%) TO 0.5(100%)
SUMMER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	2	0.2(22%)	0.1(11%) TO 0.3(33%)
0.9 - 1.4	2	-0.6(-46%)	-0.8(-80%) TO -0.3(-21%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	4	-0.2(-17%)	-0.8(-80%) TO 0.3(33%)
FALL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 0.5	1	0.4(100%)	0.4(100%) TO 0.4(100%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	3	0.1(9%)	-0.1(-9%) TO 0.4(29%)
1.4 - 1.9	2	0.6(40%)	0.5(33%) TO 0.7(47%)
1.9 - 2.9	2	0.3(10%)	-0.2(-9%) TO 0.7(24%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	8	0.3(20%)	-0.2(-9%) TO 0.7(100%)
ANNUAL			
0.0 - 0.5	3	0.3(67%)	0.0(0%) TO 0.4(100%)
0.5 - 0.9	4	0.3(33%)	0.1(11%) TO 0.5(71%)
0.9 - 1.4	7	-0.1(-6%)	-0.8(-80%) TO 0.5(50%)
1.4 - 1.9	2	0.6(40%)	0.5(33%) TO 0.7(47%)
1.9 - 2.9	4	-0.4(-14%)	-1.1(-39%) TO 0.7(24%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	20	0.1(8%)	-1.1(-80%) TO 0.7(100%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C00-C06 DOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.5	1	1.0(48%)	1.0(48%) TO 1.0(48%)
2.5 - 3.0	1	0.9(32%)	0.9(32%) TO 0.9(32%)
3.0 - 3.5	6	0.4(10%)	-0.3(-9%) TO 1.0(31%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	2	0.1(1%)	-0.7(-16%) TO 0.8(20%)
4.5 - 0.0	1	-0.8(-17%)	-0.8(-17%) TO -0.8(-17%)
TOTAL	11	0.3(9%)	-0.8(-17%) TO 1.0(48%)
SUMMER			
0.0 - 2.5	1	0.5(24%)	0.5(24%) TO 0.5(24%)
2.5 - 3.0	5	-0.1(-4%)	-0.6(-20%) TO 0.3(11%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	1	0.2(5%)	0.2(5%) TO 0.2(5%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	7	0.0(1%)	-0.6(-20%) TO 0.5(24%)
FALL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	2	-0.1(-4%)	-0.2(-7%) TO 0.0(0%)
3.0 - 3.5	2	0.5(16%)	0.3(10%) TO 0.7(22%)
3.5 - 4.0	2	0.4(11%)	0.0(0%) TO 0.8(20%)
4.0 - 4.5	2	0.6(14%)	0.6(14%) TO 0.6(15%)
4.5 - 0.0	2	-1.0(-20%)	-2.0(-40%) TO 0.0(0%)
TOTAL	10	0.1(2%)	-2.0(-40%) TO 0.8(22%)
ANNUAL			
0.0 - 2.5	2	0.8(36%)	0.5(24%) TO 1.0(48%)
2.5 - 3.0	8	0.0(1%)	-0.6(-20%) TO 0.9(32%)
3.0 - 3.5	8	0.4(12%)	-0.3(-9%) TO 1.0(31%)
3.5 - 4.0	3	0.3(9%)	0.0(0%) TO 0.8(20%)
4.0 - 4.5	4	0.3(8%)	-0.7(-16%) TO 0.8(20%)
4.5 - 0.0	3	-0.9(-19%)	-2.0(-40%) TO 0.0(0%)
TOTAL	28	0.2(4%)	-2.0(-40%) TO 1.0(48%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C31-C33 NO2NO3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	2	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	2	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
SUMMER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 - 20.0	3	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	3	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
ANNUAL					
0.0 - 20.0	5	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C31-C33 NH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	2	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	2	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
SUMMER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 - 20.0	3	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	3	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
ANNUAL					
0.0 - 20.0	5	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C31-C33 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE
SPRING					
0.0 -200.0	2	150(75%)	0(0%) TO 300(150%)	330(1650%)	180(900%) TO 480(2400%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	2	150(75%)	0(0%) TO 300(150%)	330(1650%)	180(900%) TO 480(2400%)
SUMMER					
0.0 -200.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 -200.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 -200.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
ANNUAL					
0.0 -200.0	5	60(30%)	0(0%) TO 300(150%)	132(2364%)	0(0%) TO 480(2430%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	60(30%)	0(0%) TO 300(150%)	132(2364%)	0(0%) TO 480(2400%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C31-C33 PTOT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	1	7(30%)	7(30%) TO 7(30%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	1	-3(-8%)	-3(-8%) TO -3(-8%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	2(7%)	-3(-8%) TO 7(30%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	1	-1(-4%)	-1(-4%) TO -1(-4%)
35.0 - 50.0	2	0(0%)	-7(-19%) TO 7(18%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	-0(-1%)	-7(-19%) TO 7(18%)
ANNUAL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	1	7(30%)	7(30%) TO 7(30%)
25.0 - 35.0	1	-1(-4%)	-1(-4%) TO -1(-4%)
35.0 - 50.0	3	-1(-3%)	-7(-19%) TO 7(18%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	1(2%)	-7(-19%) TO 7(30%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C31-C33 TURB — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 1.0	1	-0.2(-25%)	-0.2(-25%) TO -0.2(-25%)
1.0 - 5.0	1	-1.4(-64%)	-1.4(-64%) TO -1.4(-64%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	-0.8(-53%)	-1.4(-64%) TO -0.2(-25%)
SUMMER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 1.0	1	-0.4(-40%)	-0.4(-40%) TO -0.4(-40%)
1.0 - 5.0	2	-2.2(-75%)	-2.3(-77%) TO -2.0(-74%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	3	-1.6(-70%)	-2.3(-77%) TO -0.4(-40%)
ANNUAL			
0.0 - 1.0	2	-0.3(-33%)	-0.4(-40%) TO -0.2(-25%)
1.0 - 5.0	3	-1.9(-72%)	-2.3(-77%) TO -1.4(-64%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	-1.3(-65%)	-2.3(-77%) TO -0.2(-25%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C31-C33 TOTRES ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	1	-5(-7%)	-5(-7%) TO -5(-7%)
75.0 -105.0	1	-17(-21%)	-17(-21%) TO -17(-21%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	-11(-14%)	-17(-21%) TO -5(-7%)
SUMMER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	1	-14(-17%)	-19(-21%) TO -8(-10%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	-14(-17%)	-19(-21%) TO -8(-10%)
ANNUAL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	1	-5(-7%)	-5(-7%) TO -5(-7%)
75.0 -105.0	4	-15(-18%)	-19(-21%) TO -8(-10%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	-13(-16%)	-19(-21%) TO -5(-7%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C31-C33 TOTNFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.0	1	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	0(0%)	0(0%) TO 0(0%)
SUMMER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.0	1	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 5.0	2	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	0(0%)	0(0%) TO 0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C31-C33 TOTFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	2	-6(-8%)	-7(-9%) TO -5(-7%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	-6(-8%)	-7(-9%) TO -5(-7%)
SUMMER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	1	4(6%)	4(6%) TO 4(6%)
69.0 - 85.0	1	-8(-11%)	-8(-11%) TO -8(-11%)
85.0 - 0.0	1	-56(-46%)	-56(-46%) TO -56(-46%)
TOTAL	3	-20(-22%)	-56(-46%) TO 4(6%)
ANNUAL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	1	4(6%)	4(6%) TO 4(6%)
69.0 - 85.0	3	-7(-9%)	-8(-11%) TO -5(-7%)
85.0 - 0.0	1	-56(-46%)	-56(-46%) TO -56(-46%)
TOTAL	5	-14(-17%)	-56(-46%) TO 4(6%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C31-C33 SP_COND ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	2	-10(-11%)	-11(-13%) TO -9(-10%)
TOTAL	2	-10(-11%)	-11(-13%) TO -9(-10%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	3	-11(-14%)	-14(-17%) TO -8(-10%)
TOTAL	3	-11(-14%)	-14(-17%) TO -8(-10%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	5	-11(-13%)	-14(-17%) TO -8(-10%)
TOTAL	5	-11(-13%)	-14(-17%) TO -8(-10%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C33-C34 NO2NO3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	2	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	2	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
SUMMER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 - 20.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
ANNUAL					
0.0 - 20.0	5	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C33-C34 NH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	2	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	2	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
SUMMER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 - 20.0	1	10(50%)	0(0%) TO 20(100%)	23(2267%)	0(0%) TO 39(3900%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	1	10(50%)	0(0%) TO 20(100%)	23(2267%)	0(0%) TO 39(3900%)
ANNUAL					
0.0 - 20.0	5	6(30%)	0(0%) TO 20(100%)	14(1360%)	0(0%) TO 39(3900%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	6(30%)	0(0%) TO 20(100%)	14(1360%)	0(0%) TO 39(3900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C33-C34 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE
SPRING					
0.0 -200.0	1	100(50%)	100(50%) TO 100(50%)	100(50%)	100(50%) TO 100(50%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	1	-100(-20%)	-100(-20%) TO -100(-20%)	-100(-20%)	-100(-20%) TO -100(-20%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	2	0(0%)	-100(-20%) TO 100(50%)	0(0%)	-100(-20%) TO 100(50%)
SUMMER					
0.0 -200.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 -200.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 -200.0	3	33(17%)	0(0%) TO 100(50%)	153(192%)	0(0%) TO 280(1400%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	3	33(17%)	0(0%) TO 100(50%)	153(192%)	0(0%) TO 280(1400%)
ANNUAL					
0.0 -200.0	4	50(25%)	0(0%) TO 100(50%)	140(127%)	0(0%) TO 280(1400%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	1	-100(-20%)	-100(-20%) TO -100(-20%)	-100(-20%)	-100(-20%) TO -100(-20%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	20(8%)	-100(-20%) TO 100(50%)	92(49%)	-100(-20%) TO 280(1400%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C33-C34 PTOT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	2	3(10%)	0(0%) TO 6(18%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	3(10%)	0(0%) TO 6(18%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	1	22(88%)	22(88%) TO 22(88%)
25.0 - 35.0	1	5(17%)	5(17%) TO 5(17%)
35.0 - 50.0	1	-13(-28%)	-13(-28%) TO -13(-28%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	5(14%)	-13(-28%) TO 22(88%)
ANNUAL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	1	22(88%)	22(88%) TO 22(88%)
25.0 - 35.0	3	4(12%)	0(0%) TO 6(18%)
35.0 - 50.0	1	-13(-28%)	-13(-28%) TO -13(-28%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	4(12%)	-13(-28%) TO 22(88%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C33-C34 TURB

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	2	1.0(136%)	0.7(88%) TO 1.2(200%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	1.0(136%)	0.7(88%) TO 1.2(200%)
SUMMER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 1.0	1	1.5(225%)	1.1(163%) TO 2.2(275%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	1	1.5(225%)	1.1(163%) TO 2.2(275%)
ANNUAL			
0.0 - 1.0	5	1.3(188%)	0.7(88%) TO 2.2(275%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	1.3(188%)	0.7(88%) TO 2.2(275%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C33-C34 TOTAES — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	1	4(6%)	4(6%) TO 4(6%)
65.0 - 75.0	1	-4(-6%)	-4(-6%) TO -4(-6%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	0(0%)	-4(-6%) TO 4(6%)
SUMMER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	3	-2(-3%)	-5(-7%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	-2(-3%)	-5(-7%) TO 0(0%)
ANNUAL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	1	4(6%)	4(6%) TO 4(6%)
65.0 - 75.0	4	-3(-4%)	-5(-7%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	-1(-2%)	-5(-7%) TO 4(6%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C33-C34 TOTNFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.0	1	4(200%)	4(200%) TO 4(200%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	4(200%)	4(200%) TO 4(200%)
SUMMER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.0	1	1(50%)	1(50%) TO 1(50%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	1(50%)	1(50%) TO 1(50%)
ANNUAL			
0.0 - 5.0	2	3(125%)	1(50%) TO 4(200%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	3(125%)	1(50%) TO 4(200%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C33-C34 TOTFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	1	-8(-12%)	-8(-12%) TO -8(-12%)
69.0 - 85.0	1	-8(-11%)	-8(-11%) TO -8(-11%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	-8(-12%)	-8(-12%) TO -8(-11%)
SUMMER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	2	0(0%)	-2(-3%) TO 2(3%)
69.0 - 85.0	1	-8(-11%)	-8(-11%) TO -8(-11%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	-3(-4%)	-8(-11%) TO 2(3%)
ANNUAL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	3	-3(-4%)	-8(-12%) TO 2(3%)
69.0 - 85.0	2	-8(-11%)	-8(-11%) TO -8(-11%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	-5(-7%)	-8(-12%) TO 2(3%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

C33-C34 SP_COND — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	2	-21(-27%)	-24(-29%) TO -18(-24%)
TOTAL	2	-21(-27%)	-24(-29%) TO -18(-24%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	3	-8(-11%)	-18(-24%) TO 2(3%)
TOTAL	3	-8(-11%)	-18(-24%) TO 2(3%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	5	-13(-18%)	-24(-29%) TO 2(3%)
TOTAL	5	-13(-18%)	-24(-29%) TO 2(3%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 NO2NO3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	5	15(75%)	0(0%) TO 30(150%)	6(28%)	-19(-95%) TO 30(150%)
20.0 - 50.0	4	-15(-33%)	-20(-40%) TO -10(-25%)	-15(-33%)	-30(-40%) TO -10(-25%)
50.0 -150.0	1	-40(-50%)	-40(-50%) TO -40(-50%)	-40(-50%)	-40(-50%) TO -40(-50%)
150.0 -300.0	1	-160(-55%)	-160(-55%) TO -160(-55%)	-160(-55%)	-160(-55%) TO -160(-55%)
300.0 -500.0	1	-230(-56%)	-230(-56%) TO -230(-56%)	-230(-56%)	-230(-56%) TO -230(-56%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	9	-51(-46%)	-230(-56%) TO 30(150%)	-53(-48%)	-230(-95%) TO 30(150%)
SUMMER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	5	-4(-13%)	-10(-33%) TO 0(0%)	-8(-26%)	-29(-97%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	-4(-13%)	-10(-33%) TO 0(0%)	-8(-26%)	-29(-97%) TO 0(0%)
FALL					
0.0 - 20.0	4	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	1	-90(-56%)	-90(-56%) TO -90(-56%)	-90(-56%)	-90(-56%) TO -90(-56%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	5	-18(-38%)	-90(-56%) TO 0(0%)	-18(-55%)	-90(-56%) TO 0(0%)
WINTER					
0.0 - 20.0	2	75(375%)	0(0%) TO 150(750%)	85(8450%)	0(0%) TO 169(6900%)
20.0 - 50.0	1	-20(-50%)	-20(-50%) TO -20(-50%)	-39(-98%)	-39(-98%) TO -39(-98%)
50.0 -150.0	2	-70(-52%)	-80(-67%) TO -60(-40%)	-70(-52%)	-80(-67%) TO -60(-40%)
150.0 -300.0	4	-105(-44%)	-150(-56%) TO -70(-28%)	-105(-44%)	-150(-56%) TO -70(-28%)
300.0 -500.0	1	-200(-50%)	-200(-50%) TO -200(-50%)	-200(-50%)	-200(-50%) TO -200(-50%)
500.0 - 0.0	2	-240(-39%)	-250(-42%) TO -230(-37%)	-240(-39%)	-250(-42%) TO -230(-37%)
TOTAL	12	-93(-38%)	-250(-67%) TO 150(750%)	-93(-39%)	-250(-98%) TO 169(6900%)
ANNUAL					
0.0 - 20.0	8	23(113%)	0(0%) TO 150(750%)	23(391%)	-19(-95%) TO 169(6900%)
20.0 - 50.0	10	-10(-27%)	-20(-50%) TO 0(0%)	-14(-37%)	-49(-98%) TO 0(0%)
50.0 -150.0	3	-60(-51%)	-80(-67%) TO -40(-40%)	-60(-51%)	-80(-67%) TO -40(-40%)
150.0 -300.0	6	-112(-48%)	-160(-56%) TO -70(-28%)	-112(-48%)	-160(-56%) TO -70(-28%)
300.0 -500.0	2	-215(-54%)	-230(-56%) TO -200(-50%)	-215(-53%)	-230(-56%) TO -200(-50%)
500.0 - 0.0	2	-240(-39%)	-250(-42%) TO -230(-37%)	-240(-39%)	-250(-42%) TO -230(-37%)
TOTAL	31	-54(-39%)	-250(-67%) TO 150(750%)	-55(-41%)	-250(-98%) TO 169(6900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 NH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	9	2(11%)	0(0%) TO	20(100%)	2(43%)	-19(-95%) TO	39(3900%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	9	2(11%)	0(0%) TO	20(100%)	2(43%)	-19(-95%) TO	39(3900%)
SUMMER							
0.0 - 20.0	4	3(13%)	0(0%) TO	10(50%)	7(69%)	0(0%) TO	19(1900%)
20.0 - 50.0	1	30(100%)	30(100%) TO	30(100%)	30(100%)	30(100%) TO	30(100%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	8(36%)	0(0%) TO	30(100%)	12(82%)	0(0%) TO	30(1900%)
FALL							
0.0 - 20.0	5	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 - 20.0	9	1(6%)	0(0%) TO	10(50%)	-1(-19%)	-19(-95%) TO	10(50%)
20.0 - 50.0	4	-8(-20%)	-20(-50%) TO	0(0%)	-8(-20%)	-20(-50%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	13	-2(-6%)	-20(-50%) TO	10(50%)	-3(-20%)	-20(-95%) TO	10(50%)
ANNUAL							
0.0 - 20.0	27	1(7%)	0(0%) TO	20(100%)	1(28%)	-19(-95%) TO	39(3900%)
20.0 - 50.0	5	0(0%)	-20(-50%) TO	30(100%)	0(0%)	-20(-50%) TO	30(100%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	32	1(6%)	-20(-50%) TO	30(100%)	1(126)	-20(-95%) TO	39(3900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE		K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	
SPRING							
0.0 -200.0	3	33(17%)	0(0%) TO	100(50%)	-27(-19%)	-180(-90%) TO	100(50%)
200.0 -300.0	2	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	2	-50(-13%)	-200(-50%) TO	100(25%)	-50(-13%)	-200(-50%) TO	100(25%)
400.0 -900.0	2	-200(-29%)	-400(-67%) TO	0(0%)	-290(-41%)	-580(-97%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	9	-44(-12%)	-400(-67%) TO	100(50%)	-84(-24%)	-580(-97%) TO	100(50%)
SUMMER							
0.0 -200.0	3	0(0%)	0(0%) TO	0(0%)	180(900%)	180(900%) TO	180(900%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	1	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	1	-200(-33%)	-200(-33%) TO	-200(-33%)	-200(-33%)	-200(-33%) TO	-200(-33%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	-40(-13%)	-200(-33%) TO	0(0%)	68(32%)	-200(-33%) TO	180(900%)
FALL							
0.0 -200.0	4	25(13%)	0(0%) TO	100(50%)	-20(-18%)	-180(-90%) TO	280(1400%)
200.0 -300.0	1	-100(-33%)	-100(-33%) TO	-100(-33%)	-280(-93%)	-280(-93%) TO	-280(-93%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	0(0%)	-100(-33%) TO	100(50%)	-72(-49%)	-280(-93%) TO	280(1400%)
WINTER							
0.0 -200.0	3	0(0%)	0(0%) TO	0(0%)	-60(-75%)	-180(-90%) TO	0(0%)
200.0 -300.0	4	-25(-8%)	-100(-33%) TO	0(0%)	-25(-8%)	-100(-33%) TO	0(0%)
300.0 -400.0	2	-150(-38%)	-200(-50%) TO	-100(-25%)	-150(-38%)	-200(-50%) TO	-100(-25%)
400.0 -900.0	2	200(40%)	-100(-20%) TO	500(100%)	200(40%)	-100(-20%) TO	500(100%)
900.0 - 0.0	2	1300(113%)	100(8%) TO	2500(250%)	1300(113%)	100(8%) TO	2500(250%)
TOTAL	13	200(44%)	-200(-50%) TO	2500(250%)	186(44%)	-200(-90%) TO	2500(250%)
ANNUAL							
0.0 -200.0	13	15(8%)	0(0%) TO	100(50%)	15(17%)	-180(-90%) TO	280(1400%)
200.0 -300.0	7	-29(-10%)	-100(-33%) TO	0(0%)	-54(-18%)	-280(-93%) TO	0(0%)
300.0 -400.0	5	-80(-20%)	-200(-50%) TO	100(25%)	-80(-20%)	-200(-50%) TO	100(25%)
400.0 -900.0	5	-40(-7%)	-400(-67%) TO	500(100%)	-76(-13%)	-580(-97%) TO	500(100%)
900.0 - 0.0	2	1300(113%)	100(8%) TO	2500(250%)	1300(113%)	100(8%) TO	2500(250%)
TOTAL	32	63(17%)	-400(-67%) TO	2500(250%)	51(16%)	-580(-97%) TO	2500(1400%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 PTOT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	4	4(22%)	0(0%) TO 9(50%)
20.0 - 25.0	3	1(4%)	-1(-5%) TO 3(13%)
25.0 - 35.0	1	-9(-33%)	-9(-33%) TO -9(-33%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	1	-6(-9%)	-6(-9%) TO -6(-9%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	9	0(1%)	-9(-33%) TO 9(50%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	2	4(18%)	2(9%) TO 6(27%)
25.0 - 35.0	2	4(11%)	-1(-3%) TO 8(31%)
35.0 - 50.0	1	-10(-27%)	-10(-27%) TO -10(-27%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	1(4%)	-10(-27%) TO 8(31%)
FALL			
0.0 - 20.0	3	7(43%)	4(21%) TO 12(71%)
20.0 - 25.0	2	-3(-14%)	-3(-14%) TO -3(-13%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	3(16%)	-3(-14%) TO 12(71%)
WINTER			
0.0 - 20.0	7	1(5%)	-1(-7%) TO 3(21%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	1	13(38%)	13(38%) TO 13(38%)
35.0 - 50.0	1	-14(-39%)	-14(-39%) TO -14(-39%)
50.0 - 70.0	1	-18(-29%)	-18(-29%) TO -18(-29%)
70.0 - 0.0	3	72(78%)	-37(-46%) TO 261(218%)
TOTAL	13	16(39%)	-37(-46%) TO 261(218%)
ANNUAL			
0.0 - 20.0	14	3(18%)	-1(-7%) TO 12(71%)
20.0 - 25.0	7	1(3%)	-3(-14%) TO 6(27%)
25.0 - 35.0	4	3(9%)	-9(-33%) TO 13(38%)
35.0 - 50.0	2	-12(-33%)	-14(-39%) TO -10(-27%)
50.0 - 70.0	2	-12(-18%)	-18(-29%) TO -6(-9%)
70.0 - 0.0	3	72(78%)	-37(-46%) TO 261(218%)
TOTAL	32	7(23%)	-37(-46%) TO 261(218%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 TURB

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	8	0.2(45%)	0.0(0%) TO 0.6(200%)
1.0 - 5.0	1	2.0(118%)	2.0(118%) TO 2.0(118%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	9	0.4(70%)	0.0(0%) TO 2.0(200%)
SUMMER			
0.0 - 1.0	5	0.0(4%)	-0.1(-14%) TO 0.1(25%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	0.0(4%)	-0.1(-14%) TO 0.1(25%)
FALL			
0.0 - 1.0	4	0.2(61%)	-0.1(-33%) TO 0.7(175%)
1.0 - 5.0	1	-0.9(-82%)	-0.9(-82%) TO -0.9(-82%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	-0.0(-9%)	-0.9(-82%) TO 0.7(175%)
WINTER			
0.0 - 1.0	7	0.3(72%)	-0.2(-40%) TO 2.0(333%)
1.0 - 5.0	5	6.7(276%)	-0.9(-58%) TO 35.0(700%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	12	2.9(241%)	-0.9(-58%) TO 35.0(700%)
ANNUAL			
0.0 - 1.0	24	0.2(43%)	-0.2(-40%) TO 2.0(333%)
1.0 - 5.0	7	4.9(232%)	-0.9(-82%) TO 35.0(700%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	31	1.2(159%)	-0.9(-82%) TO 35.0(700%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 TOTRES — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE	
SPRING				
0.0 - 45.0	3	1(3%)	-4(-10%) TO	5(14%)
45.0 - 55.0	1	20(42%)	20(42%) TO	20(42%)
55.0 - 65.0	2	-6(-9%)	-9(-14%) TO	-3(-5%)
65.0 - 75.0	3	-16(-24%)	-19(-29%) TO	-12(-17%)
75.0 -105.0	0	0(0%)	0(0%) TO	0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	9	-4(-8%)	-19(-29%) TO	20(42%)
SUMMER				
0.0 - 45.0	0	0(0%)	0(0%) TO	0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO	0(0%)
55.0 - 65.0	1	-10(-16%)	-10(-16%) TO	-10(-16%)
65.0 - 75.0	1	4(6%)	4(6%) TO	4(6%)
75.0 -105.0	0	0(0%)	0(0%) TO	0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	2	-3(-5%)	-10(-16%) TO	4(6%)
FALL				
0.0 - 45.0	0	0(0%)	0(0%) TO	0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO	0(0%)
55.0 - 65.0	1	17(29%)	17(29%) TO	17(29%)
65.0 - 75.0	2	-8(-11%)	-10(-13%) TO	-6(-8%)
75.0 -105.0	2	-8(-9%)	-12(-15%) TO	-3(-3%)
105.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	5	-3(-4%)	-12(-15%) TO	17(29%)
WINTER				
0.0 - 45.0	0	0(0%)	0(0%) TO	0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO	0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO	0(0%)
65.0 - 75.0	3	-12(-16%)	-13(-18%) TO	-11(-15%)
75.0 -105.0	4	-7(-9%)	-10(-13%) TO	-4(-5%)
105.0 - 0.0	5	3(2%)	-36(-32%) TO	104(66%)
TOTAL	12	-4(-4%)	-36(-32%) TO	104(66%)
ANNUAL				
0.0 - 45.0	3	1(3%)	-4(-10%) TO	5(14%)
45.0 - 55.0	1	20(42%)	20(42%) TO	20(42%)
55.0 - 65.0	4	-1(-2%)	-10(-16%) TO	17(29%)
65.0 - 75.0	9	-11(-15%)	-19(-29%) TO	4(6%)
75.0 -105.0	6	-7(-9%)	-12(-15%) TO	-3(-3%)
105.0 - 0.0	5	3(2%)	-36(-32%) TO	104(66%)
TOTAL	28	-4(-5%)	-36(-32%) TO	104(66%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 TOTNFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE	
SPRING				
0.0 - 5.0	3	2(70%)	-1(-20%) TO	5(250%)
5.0 - 10.0	1	0(0%)	0(0%) TO	0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	4	2(44%)	-1(-20%) TO	5(250%)
SUMMER				
0.0 - 5.0	1	2(100%)	2(100%) TO	2(100%)
5.0 - 10.0	0	0(0%)	0(0%) TO	0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	1	2(100%)	2(100%) TO	2(100%)
FALL				
0.0 - 5.0	1	5(125%)	5(125%) TO	5(125%)
5.0 - 10.0	0	0(0%)	0(0%) TO	0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)
20.0 -100.0	1	-59(-98%)	-59(-98%) TO	-59(-98%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	2	-27(-44%)	-59(-98%) TO	5(125%)
WINTER				
0.0 - 5.0	2	12(383%)	2(67%) TO	21(700%)
5.0 - 10.0	2	-4(-53%)	-6(-86%) TO	-2(-25%)
10.0 - 20.0	1	-3(-25%)	-3(-25%) TO	-3(-25%)
20.0 -100.0	2	47(63%)	-25(-41%) TO	119(165%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	7	15(73%)	-25(-86%) TO	119(700%)
ANNUAL				
0.0 - 5.0	7	5(168%)	-1(-20%) TO	21(700%)
5.0 - 10.0	3	-3(-38%)	-6(-86%) TO	0(0%)
10.0 - 20.0	1	-3(-25%)	-3(-25%) TO	-3(-25%)
20.0 -100.0	3	12(20%)	-59(-98%) TO	119(165%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)
TOTAL	14	4(27%)	-59(-98%) TO	119(700%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 TOTFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	2	4(14%)	2(8%) TO 6(19%)
35.0 - 49.0	1	-2(-5%)	-2(-5%) TO -2(-5%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	5	-13(-20%)	-23(-35%) TO -3(-5%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	8	-7(-14%)	-23(-35%) TO 6(19%)
SUMMER			
0.0 - 35.0	1	20(59%)	20(59%) TO 20(59%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	1	2(3%)	2(3%) TO 2(3%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	11(22%)	2(3%) TO 20(59%)
FALL			
0.0 - 35.0	1	47(214%)	47(214%) TO 47(214%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	2	-5(-6%)	-6(-8%) TO -4(-5%)
85.0 - 0.0	2	-12(-13%)	-15(-17%) TO -8(-9%)
TOTAL	5	3(4%)	-15(-17%) TO 47(214%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	1	-11(-17%)	-11(-17%) TO -11(-17%)
69.0 - 85.0	6	-11(-15%)	-32(-46%) TO -4(-6%)
85.0 - 0.0	5	-10(-9%)	-15(-17%) TO -5(-5%)
TOTAL	12	-11(-12%)	-32(-46%) TO -4(-5%)
ANNUAL			
0.0 - 35.0	4	19(66%)	2(8%) TO 47(214%)
35.0 - 49.0	1	-2(-5%)	-2(-5%) TO -2(-5%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	7	-11(-16%)	-23(-35%) TO 2(3%)
69.0 - 85.0	8	-10(-13%)	-32(-46%) TO -4(-5%)
85.0 - 0.0	7	-10(-10%)	-15(-17%) TO -5(-5%)
TOTAL	27	-6(-8%)	-32(-46%) TO 47(214%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 SP_COND ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	9	-9(-20%)	-33(-49%) TO 4(19%)
TOTAL	9	-9(-20%)	-33(-49%) TO 4(19%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	5	-10(-14%)	-18(-28%) TO -2(-3%)
TOTAL	5	-10(-14%)	-18(-28%) TO -2(-3%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	3	-5(-5%)	-7(-6%) TO -1(-1%)
TOTAL	3	-5(-5%)	-7(-6%) TO -1(-1%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	12	-7(-8%)	-13(-13%) TO -2(-3%)
TOTAL	12	-7(-8%)	-13(-13%) TO -2(-3%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	29	-8(-11%)	-33(-49%) TO 4(19%)
TOTAL	29	-8(-11%)	-33(-49%) TO 4(19%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 TOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.9	1	0.5(31%)	0.5(31%) TO 0.5(31%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	1	1.7(35%)	1.7(35%) TO 1.7(35%)
4.9 - 5.9	2	0.3(6%)	-0.2(-4%) TO 0.8(15%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	4	0.7(16%)	-0.2(-4%) TO 1.7(35%)
SUMMER			
0.0 - 2.9	1	0.8(44%)	0.8(44%) TO 0.8(44%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	1	0.8(44%)	0.8(44%) TO 0.8(44%)
FALL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	1	-2.2(-20%)	-2.2(-20%) TO -2.2(-20%)
TOTAL	1	-2.2(-20%)	-2.2(-20%) TO -2.2(-20%)
ANNUAL			
0.0 - 2.9	2	0.7(38%)	0.5(31%) TO 0.8(44%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	1	1.7(35%)	1.7(35%) TO 1.7(35%)
4.9 - 5.9	2	0.3(6%)	-0.2(-4%) TO 0.8(15%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	1	-2.2(-20%)	-2.2(-20%) TO -2.2(-20%)
TOTAL	6	0.2(5%)	-2.2(-20%) TO 1.7(44%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 POC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	2	0.5(41%)	-0.3(-27%) TO 1.2(109%)
1.4 - 1.9	1	0.5(33%)	0.5(33%) TO 0.5(33%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	3	0.5(38%)	-0.3(-27%) TO 1.2(109%)
SUMMER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	1	-1.9(-49%)	-1.9(-49%) TO -1.9(-49%)
TOTAL	1	-1.9(-49%)	-1.9(-49%) TO -1.9(-49%)
ANNUAL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	2	0.5(41%)	-0.3(-27%) TO 1.2(109%)
1.4 - 1.9	1	0.5(33%)	0.5(33%) TO 0.5(33%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	1	-1.9(-49%)	-1.9(-49%) TO -1.9(-49%)
TOTAL	4	-0.1(-7%)	-1.9(-49%) TO 1.2(109%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D01-D03 DOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	1	0.3(9%)	0.3(9%) TO 0.3(9%)
3.5 - 4.0	2	0.4(11%)	0.3(8%) TO 0.5(13%)
4.0 - 4.5	1	0.1(2%)	0.1(2%) TO 0.1(2%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	4	0.3(8%)	0.1(2%) TO 0.5(13%)
SUMMER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	1	-0.1(-3%)	-0.1(-3%) TO -0.1(-3%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	1	-0.1(-3%)	-0.1(-3%) TO -0.1(-3%)
FALL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	1	-0.3(-4%)	-0.3(-4%) TO -0.3(-4%)
TOTAL	1	-0.3(-4%)	-0.3(-4%) TO -0.3(-4%)
ANNUAL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	1	-0.1(-3%)	-0.1(-3%) TO -0.1(-3%)
3.0 - 3.5	1	0.3(9%)	0.3(9%) TO 0.3(9%)
3.5 - 4.0	2	0.4(11%)	0.3(8%) TO 0.5(13%)
4.0 - 4.5	1	0.1(2%)	0.1(2%) TO 0.1(2%)
4.5 - 0.0	1	-0.3(-4%)	-0.3(-4%) TO -0.3(-4%)
TOTAL	6	0.1(3%)	-0.3(-4%) TO 0.5(13%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D04-D05 NO2NO3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	2	0(0%)	0(0%) TO	0(0%)	-10(-90%)	-19(-95%) TO	0(0%)
20.0 - 50.0	2	-25(-86%)	-30(-60%) TO	-20(-50%)	-44(-98%)	-49(-98%) TO	-39(-98%)
50.0 -150.0	3	-50(-65%)	-80(-73%) TO	-30(-50%)	-56(-73%)	-80(-98%) TO	-30(-50%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	7	-29(-56%)	-80(-73%) TO	0(0%)	-39(-81%)	-80(-98%) TO	0(0%)
SUMMER							
0.0 - 20.0	4	0(0%)	0(0%) TO	0(0%)	-5(-83%)	-19(-95%) TO	0(0%)
20.0 - 50.0	1	-10(-33%)	-10(-33%) TO	-10(-33%)	-29(-97%)	-29(-97%) TO	-29(-97%)
50.0 -150.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	-2(-9%)	-10(-33%) TO	0(0%)	-10(-91%)	-29(-97%) TO	0(0%)
FALL							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	2	-75(-79%)	-100(-83%) TO	-50(-71%)	-85(-89%)	-100(-99%) TO	-69(-83%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	1	-30(-8%)	-30(-8%) TO	-30(-8%)	-30(-8%)	-30(-8%) TO	-30(-8%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	3	-60(-33%)	-100(-83%) TO	-30(-8%)	-66(-36%)	-100(-99%) TO	-30(-8%)
ANNUAL							
0.0 - 20.0	6	0(0%)	0(0%) TO	0(0%)	-6(-86%)	-19(-95%) TO	0(0%)
20.0 - 50.0	3	-20(-50%)	-30(-60%) TO	-10(-33%)	-39(-98%)	-49(-98%) TO	-29(-97%)
50.0 -150.0	5	-60(-71%)	-100(-83%) TO	-30(-50%)	-68(-80%)	-100(-99%) TO	-30(-50%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	1	-30(-8%)	-30(-8%) TO	-30(-8%)	-30(-8%)	-30(-8%) TO	-30(-8%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	15	-26(-38%)	-100(-83%) TO	0(0%)	-35(-85%)	-100(-99%) TO	0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D04-D05 NH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	7	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	7	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
SUMMER							
0.0 - 20.0	4	10(50%)	0(0%) TO	20(100%)	15(140%)	0(0%) TO	29(2900%)
20.0 - 50.0	1	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	8(33%)	0(0%) TO	20(100%)	12(72%)	0(0%) TO	29(2900%)
FALL							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 - 20.0	2	10(50%)	0(0%) TO	20(100%)	29(2900%)	19(1900%) TO	39(3900%)
20.0 - 50.0	1	360(720%)	360(720%) TO	360(720%)	360(720%)	360(720%) TO	360(720%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	3	127(423%)	0(0%) TO	360(720%)	139(8044%)	19(720%) TO	360(39004%)
ANNUAL							
0.0 - 20.0	13	5(23%)	0(0%) TO	20(100%)	9(229%)	0(0%) TO	39(3900%)
20.0 - 50.0	2	180(400%)	0(0%) TO	360(720%)	180(400%)	0(0%) TO	360(720%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	15	28(120%)	0(0%) TO	360(720%)	32(338%)	0(0%) TO	360(39004%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

ACTUAL CHANGE(PERCENT CHANGE)

D04-D05 KJEL

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE		K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	
SPRING							
0.0 -200.0	5	40(20%)	0(0%) TO	100(50%)	76(136%)	0(0%) TO	280(1400%)
200.0 -300.0	2	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	7	29(12%)	0(0%) TO	100(50%)	54(43%)	0(0%) TO	280(1400%)
SUMMER							
0.0 -200.0	3	100(50%)	0(0%) TO	200(100%)	280(1400%)	180(900%) TO	380(1900%)
200.0 -300.0	1	200(67%)	200(67%) TO	200(67%)	200(67%)	200(67%) TO	200(67%)
300.0 -400.0	1	100(25%)	100(25%) TO	100(25%)	100(25%)	100(25%) TO	100(25%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	120(44%)	0(0%) TO	200(100%)	228(152%)	100(25%) TO	380(1900%)
FALL							
0.0 -200.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 -200.0	2	150(75%)	100(50%) TO	200(100%)	240(218%)	200(100%) TO	280(1400%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	1	300(9%)	300(9%) TO	300(9%)	300(9%)	300(9%) TO	300(9%)
TOTAL	3	200(169%)	100(9%) TO	300(100%)	260(226%)	200(9%) TO	300(1400%)
ANNUAL							
0.0 -200.0	10	80(40%)	0(0%) TO	200(100%)	170(304%)	0(0%) TO	380(1900%)
200.0 -300.0	3	67(22%)	0(0%) TO	200(67%)	67(22%)	0(0%) TO	200(67%)
300.0 -400.0	1	100(25%)	100(25%) TO	100(25%)	100(25%)	100(25%) TO	100(25%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	1	300(9%)	300(9%) TO	300(9%)	300(9%)	300(9%) TO	300(9%)
TOTAL	15	93(21%)	0(0%) TO	300(100%)	153(44%)	0(0%) TO	380(1900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D04-D05 PTOT INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	6	6(36%)	2(10%) TO 13(76%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	1	-7(-25%)	-7(-25%) TO -7(-25%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	7	4(22%)	-7(-25%) TO 13(76%)
SUMMER			
0.0 - 20.0	1	8(42%)	8(42%) TO 8(42%)
20.0 - 25.0	1	18(78%)	18(78%) TO 18(78%)
25.0 - 35.0	3	11(37%)	10(29%) TO 14(54%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	12(48%)	8(29%) TO 18(78%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 20.0	1	56(295%)	56(295%) TO 56(295%)
20.0 - 25.0	1	63(263%)	63(263%) TO 63(263%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	1	-25(-6%)	-25(-6%) TO -25(-6%)
TOTAL	3	31(204%)	-25(-6%) TO 63(295%)
ANNUAL			
0.0 - 20.0	8	12(75%)	2(10%) TO 56(295%)
20.0 - 25.0	2	41(172%)	18(78%) TO 63(263%)
25.0 - 35.0	4	7(23%)	-7(-25%) TO 14(54%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	1	-25(-6%)	-25(-6%) TO -25(-6%)
TOTAL	15	12(25%)	-25(-25%) TO 63(295%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D04-D05 TURB INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	7	0.2(60%)	-0.5(-50%) TO 0.6(300%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	7	0.2(60%)	-0.5(-50%) TO 0.6(300%)
SUMMER			
0.0 - 1.0	5	1.3(420%)	0.5(250%) TO 2.0(600%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	1.3(420%)	0.5(250%) TO 2.0(600%)
FALL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 1.0	2	0.5(100%)	0.5(83%) TO 0.5(125%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	1	20.0(48%)	20.0(48%) TO 20.0(48%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	3	7.0(49%)	0.5(48%) TO 20.0(125%)
ANNUAL			
0.0 - 1.0	14	0.6(176%)	-0.5(-50%) TO 2.0(600%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	1	20.0(48%)	20.0(48%) TO 20.0(48%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	15	1.9(61%)	-0.5(-50%) TO 20.0(600%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D04-D05 TOTBS — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 45.0	7	8(24%)	-1(-4%) TO 27(60%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	7	8(24%)	-1(-4%) TO 27(60%)
SUMMER			
0.0 - 45.0	1	6(21%)	6(21%) TO 6(21%)
45.0 - 55.0	1	2(4%)	2(4%) TO 2(4%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	4(11%)	2(4%) TO 6(21%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	3	31(51%)	5(9%) TO 57(90%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	1	17(6%)	17(6%) TO 17(6%)
TOTAL	3	26(20%)	5(6%) TO 57(90%)
ANNUAL			
0.0 - 45.0	8	7(23%)	-1(-4%) TO 27(60%)
45.0 - 55.0	1	2(4%)	2(4%) TO 2(4%)
55.0 - 65.0	2	31(51%)	5(9%) TO 57(90%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	1	17(6%)	17(6%) TO 17(6%)
TOTAL	12	12(20%)	-1(-4%) TO 57(90%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D04-D05 TOTNFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.0	5	4(200%)	0(0%) TO 14(1400%)
5.0 - 10.0	1	-5(-71%)	-5(-71%) TO -5(-71%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	6	3(94%)	-5(-71%) TO 14(1400%)
SUMMER			
0.0 - 5.0	1	-3(-60%)	-3(-60%) TO -3(-60%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	-3(-60%)	-3(-60%) TO -3(-60%)
FALL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.0	2	28(786%)	0(0%) TO 55(2750%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	1	14(7%)	14(7%) TO 14(7%)
TOTAL	3	23(33%)	0(0%) TO 55(2750%)
ANNUAL			
0.0 - 5.0	8	9(322%)	-3(-60%) TO 55(2750%)
5.0 - 10.0	1	-5(-71%)	-5(-71%) TO -5(-71%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	1	14(7%)	14(7%) TO 14(7%)
TOTAL	10	8(35%)	-5(-71%) TO 55(2750%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D04-D05 TOTFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	5	3(11%)	-1(-4%) TO 5(25%)
35.0 - 49.0	2	12(29%)	11(28%) TO 13(30%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	7	5(18%)	-1(-4%) TO 13(30%)
SUMMER			
0.0 - 35.0	1	4(13%)	4(13%) TO 4(13%)
35.0 - 49.0	1	5(12%)	5(12%) TO 5(12%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	5(13%)	4(12%) TO 5(13%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	1	5(9%)	5(9%) TO 5(9%)
59.0 - 69.0	1	2(3%)	2(3%) TO 2(3%)
69.0 - 85.0	1	3(4%)	3(4%) TO 3(4%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	3(5%)	2(3%) TO 5(9%)
ANNUAL			
0.0 - 35.0	6	3(11%)	-1(-4%) TO 5(25%)
35.0 - 49.0	3	10(23%)	5(12%) TO 13(30%)
49.0 - 59.0	1	5(9%)	5(9%) TO 5(9%)
59.0 - 69.0	1	2(3%)	2(3%) TO 2(3%)
69.0 - 85.0	1	3(4%)	3(4%) TO 3(4%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	12	5(12%)	-1(-4%) TO 13(30%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D04-D05 SP_COND — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	1	4(31%)	4(31%) TO 4(31%)
15.5 - 18.0	3	0(2%)	-5(-28%) TO 4(24%)
18.0 - 0.0	3	9(30%)	3(15%) TO 15(42%)
TOTAL	7	5(21%)	-5(-28%) TO 15(42%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	5	2(6%)	-4(-6%) TO 5(23%)
TOTAL	5	2(6%)	-4(-6%) TO 5(23%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	3	9(16%)	4(8%) TO 13(28%)
TOTAL	3	9(16%)	4(8%) TO 13(28%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	1	4(31%)	4(31%) TO 4(31%)
15.5 - 18.0	3	0(2%)	-5(-28%) TO 4(24%)
18.0 - 0.0	11	6(15%)	-4(-6%) TO 15(42%)
TOTAL	15	5(14%)	-5(-28%) TO 15(42%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D04-D05 TOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.9	1	2.5(156%)	2.5(156%) TO 2.5(156%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	1	0.7(17%)	0.7(17%) TO 0.7(17%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	1.6(56%)	0.7(17%) TO 2.5(156%)
SUMMER			
0.0 - 2.9	1	1.5(107%)	1.5(107%) TO 1.5(107%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	1	1.5(107%)	1.5(107%) TO 1.5(107%)
FALL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	1	0.8(5%)	0.8(5%) TO 0.8(5%)
TOTAL	1	0.8(5%)	0.8(5%) TO 0.8(5%)
ANNUAL			
0.0 - 2.9	2	2.0(133%)	1.5(107%) TO 2.5(156%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	1	0.7(17%)	0.7(17%) TO 0.7(17%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	1	0.8(5%)	0.8(5%) TO 0.8(5%)
TOTAL	4	1.4(23%)	0.7(5%) TO 2.5(156%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D04-D05 POC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
SUMMER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	1	-0.9(-8%)	-0.9(-8%) TO -0.9(-8%)
TOTAL	1	-0.9(-8%)	-0.9(-8%) TO -0.9(-8%)
ANNUAL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	1	-0.9(-8%)	-0.9(-8%) TO -0.9(-8%)
TOTAL	1	-0.9(-8%)	-0.9(-8%) TO -0.9(-8%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

D04-D05 DOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	1	0.1(3%)	0.1(3%) TO 0.1(3%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	1	-0.1(-2%)	-0.1(-2%) TO -0.1(-2%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	0.0(0%)	-0.1(-2%) TO 0.1(3%)
SUMMER			
0.0 - 2.5	1	1.2(52%)	1.2(52%) TO 1.2(52%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	1	1.2(52%)	1.2(52%) TO 1.2(52%)
FALL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	1	1.7(37%)	1.7(37%) TO 1.7(37%)
TOTAL	1	1.7(37%)	1.7(37%) TO 1.7(37%)
ANNUAL			
0.0 - 2.5	1	1.2(52%)	1.2(52%) TO 1.2(52%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	1	0.1(3%)	0.1(3%) TO 0.1(3%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	1	-0.1(-2%)	-0.1(-2%) TO -0.1(-2%)
4.5 - 0.0	1	1.7(37%)	1.7(37%) TO 1.7(37%)
TOTAL	4	0.7(20%)	-0.1(-2%) TO 1.7(52%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

EOO-EO3 NO2NO3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	5	-422(-95%)	-450(-96%) TO -370(-95%)	-441(-100%)	-469(-100%) TO -389(-100%)
500.0 - 0.0	2	-180(-34%)	-530(-96%) TO 170(33%)	-190(-36%)	-549(-100%) TO 170(33%)
TOTAL	7	-353(-76%)	-530(-96%) TO 170(33%)	-369(-79%)	-549(-100%) TO 170(33%)
SUMMER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	6	-58(-58%)	-90(-82%) TO 10(11%)	-62(-62%)	-109(-99%) TO 10(11%)
150.0 -300.0	1	-190(-90%)	-190(-90%) TO -190(-90%)	-209(-100%)	-209(-100%) TO -209(-100%)
300.0 -500.0	1	-390(-95%)	-390(-95%) TO -390(-95%)	-409(-100%)	-409(-100%) TO -409(-100%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	9	-103(-73%)	-390(-95%) TO 10(11%)	-110(-78%)	-409(-100%) TO 10(11%)
ANNUAL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	6	-58(-58%)	-90(-82%) TO 10(11%)	-62(-62%)	-109(-99%) TO 10(11%)
150.0 -300.0	1	-190(-90%)	-190(-90%) TO -190(-90%)	-209(-100%)	-209(-100%) TO -209(-100%)
300.0 -500.0	4	-417(-95%)	-450(-96%) TO -370(-95%)	-436(-100%)	-469(-100%) TO -389(-100%)
500.0 - 0.0	2	-180(-34%)	-530(-96%) TO 170(33%)	-190(-36%)	-549(-100%) TO 170(33%)
TOTAL	16	-213(-75%)	-530(-96%) TO 170(33%)	-223(-79%)	-549(-100%) TO 170(33%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E00-E03 MH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	3	-27(-57%)	-30(-60%) TO	-20(-50%)	-46(-98%)	-49(-98%) TO	-39(-98%)
50.0 -100.0	3	-43(-68%)	-50(-71%) TO	-40(-67%)	-56(-88%)	-69(-99%) TO	-40(-67%)
100.0 - 0.0	1	120(20%)	120(20%) TO	120(20%)	120(20%)	120(20%) TO	120(20%)
TOTAL	7	-13(-12%)	-50(-71%) TO	120(20%)	-26(-24%)	-69(-99%) TO	120(20%)
SUMMER							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
FALL							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 - 20.0	1	40(200%)	40(200%) TO	40(200%)	40(200%)	40(200%) TO	40(200%)
20.0 - 50.0	4	-20(-42%)	-30(-60%) TO	0(0%)	-25(-52%)	-49(-98%) TO	0(0%)
50.0 -100.0	4	-33(-48%)	-50(-67%) TO	-10(-17%)	-37(-55%)	-59(-98%) TO	-10(-17%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	9	-19(-35%)	-50(-67%) TO	40(200%)	-23(-43%)	-59(-98%) TO	40(200%)
ANNUAL							
0.0 - 20.0	1	40(200%)	40(200%) TO	40(200%)	40(200%)	40(200%) TO	40(200%)
20.0 - 50.0	7	-23(-48%)	-30(-60%) TO	0(0%)	-34(-72%)	-49(-98%) TO	0(0%)
50.0 -100.0	7	-37(-57%)	-50(-71%) TO	-10(-17%)	-45(-69%)	-69(-99%) TO	-10(-17%)
100.0 - 0.0	1	120(20%)	120(20%) TO	120(20%)	120(20%)	120(20%) TO	120(20%)
TOTAL	16	-16(-21%)	-50(-71%) TO	120(200%)	-25(-32%)	-69(-99%) TO	120(200%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E00-E01 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE		K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	
SPRING							
0.0 -200.0	4	175(88%)	100(50%) TO	300(150%)	220(142%)	100(50%) TO	480(2400%)
200.0 -300.0	1	200(67%)	200(67%) TO	200(67%)	200(67%)	200(67%) TO	200(67%)
300.0 -400.0	1	2200(550%)	2200(550%) TO	2200(550%)	2200(550%)	2200(550%) TO	2200(550%)
400.0 -900.0	1	100(17%)	100(17%) TO	100(17%)	100(17%)	100(17%) TO	100(17%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	7	457(152%)	100(17%) TO	2200(550%)	483(176%)	100(17%) TO	2200(2400%)
SUMMER							
0.0 -200.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
FALL							
0.0 -200.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 -200.0	1	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	2	-100(-33%)	-100(-33%) TO	-100(-33%)	-100(-33%)	-100(-33%) TO	-100(-33%)
300.0 -400.0	1	-200(-50%)	-200(-50%) TO	-200(-50%)	-200(-50%)	-200(-50%) TO	-200(-50%)
400.0 -900.0	4	-375(-56%)	-600(-75%) TO	-200(-33%)	-375(-56%)	-600(-75%) TO	-200(-33%)
900.0 - 0.0	1	-600(-20%)	-600(-20%) TO	-600(-20%)	-600(-20%)	-600(-20%) TO	-600(-20%)
TOTAL	9	-278(-36%)	-600(-75%) TO	0(0%)	-278(-37%)	-600(-75%) TO	0(0%)
ANNUAL							
0.0 -200.0	5	140(70%)	0(0%) TO	300(150%)	176(138%)	0(0%) TO	480(2400%)
200.0 -300.0	3	0(0%)	-100(-33%) TO	200(67%)	0(0%)	-100(-33%) TO	200(67%)
300.0 -400.0	2	1000(250%)	-200(-50%) TO	2200(550%)	1000(250%)	-200(-50%) TO	2200(550%)
400.0 -900.0	5	-280(-42%)	-600(-75%) TO	100(17%)	-280(-42%)	-600(-75%) TO	100(17%)
900.0 - 0.0	1	-600(-20%)	-600(-20%) TO	-600(-20%)	-600(-20%)	-600(-20%) TO	-600(-20%)
TOTAL	16	44(8%)	-600(-75%) TO	2200(550%)	55(10%)	-600(-75%) TO	2200(2400%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E00-E03 PTOT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	3	-18(-29%)	-37(-54%) TO 1(2%)
70.0 - 0.0	3	-25(-30%)	-34(-40%) TO -16(-22%)
TOTAL	6	-21(-30%)	-37(-54%) TO 1(2%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	1	-40(-65%)	-40(-65%) TO -40(-65%)
70.0 - 0.0	8	-283(-54%)	-1090(-94%) TO -43(-40%)
TOTAL	9	-256(-54%)	-1090(-94%) TO -40(-40%)
ANNUAL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	4	-23(-38%)	-40(-65%) TO 1(2%)
70.0 - 0.0	11	-213(-53%)	-1090(-94%) TO -16(-22%)
TOTAL	15	-162(-52%)	-1090(-94%) TO 1(2%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E00-E03 TURB

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	3	-11.6(-92%)	-13.3(-93%) TO -8.9(-91%)
20.0 -100.0	3	-22.5(-90%)	-25.5(-92%) TO -20.7(-88%)
100.0 - 0.0	1	-689.0(-69%)	-689.0(-69%) TO -689.0(-69%)
TOTAL	7	-113.0(-71%)	-689.0(-93%) TO -8.9(-69%)
SUMMER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	1	-1.4(-53%)	-1.4(-53%) TO -1.4(-53%)
5.0 - 20.0	1	-15.8(-93%)	-15.8(-93%) TO -15.8(-93%)
20.0 -100.0	3	-60.7(-94%)	-83.9(-99%) TO -36.8(-91%)
100.0 - 0.0	5	-150.1(-43%)	-941.0(-100%) TO 747.0(397%)
TOTAL	10	-95.0(-48%)	-941.0(-100%) TO 747.0(397%)
ANNUAL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	1	-1.4(-53%)	-1.4(-53%) TO -1.4(-53%)
5.0 - 20.0	4	-12.7(-92%)	-15.8(-93%) TO -8.9(-91%)
20.0 -100.0	6	-41.6(-93%)	-83.9(-99%) TO -20.7(-88%)
100.0 - 0.0	6	-239.9(-52%)	-941.0(-100%) TO 747.0(397%)
TOTAL	17	-102.4(-57%)	-941.0(-100%) TO 747.0(397%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E00-E01 TOTRES ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	7	-535(-75%)	-3723(-89%) TO 23(18%)
TOTAL	7	-535(-75%)	-3723(-89%) TO 23(18%)
SUMMER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	8	-419(-62%)	-1781(-91%) TO -30(-18%)
TOTAL	8	-419(-62%)	-1781(-91%) TO -30(-18%)
ANNUAL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	15	-473(-68%)	-3723(-91%) TO 23(18%)
TOTAL	15	-473(-68%)	-3723(-91%) TO 23(18%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E00-E01 TOTNFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	1	-7(-70%)	-7(-70%) TO -7(-70%)
10.0 - 20.0	1	-9(-75%)	-9(-75%) TO -9(-75%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	1	-3717(-91%)	-3717(-91%) TO -3717(-91%)
TOTAL	3	-1244(-91%)	-3717(-91%) TO -7(-70%)
SUMMER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	3	-53(-92%)	-81(-96%) TO -34(-85%)
100.0 - 0.0	4	-674(-69%)	-1807(-97%) TO -130(-36%)
TOTAL	7	-404(-70%)	-1807(-97%) TO -34(-36%)
ANNUAL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	1	-7(-70%)	-7(-70%) TO -7(-70%)
10.0 - 20.0	1	-9(-75%)	-9(-75%) TO -9(-75%)
20.0 -100.0	3	-53(-92%)	-81(-96%) TO -14(-85%)
100.0 - 0.0	5	-1283(-80%)	-3717(-97%) TO -130(-36%)
TOTAL	10	-659(-81%)	-3717(-97%) TO -7(-36%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E00-E03 TOTFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	1	-6(-7%)	-6(-7%) TO -6(-7%)
85.0 - 0.0	5	6(4%)	-6(-4%) TO 24(18%)
TOTAL	6	4(3%)	-6(-7%) TO 24(18%)
SUMMER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	1	-27(-44%)	-27(-44%) TO -27(-44%)
69.0 - 85.0	1	26(32%)	26(32%) TO 26(32%)
85.0 - 0.0	6	-38(-25%)	-98(-49%) TO 14(13%)
TOTAL	8	-20(-22%)	-98(-49%) TO 26(32%)
ANNUAL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	1	-27(-44%)	-27(-44%) TO -27(-44%)
69.0 - 85.0	2	10(12%)	-6(-7%) TO 26(32%)
85.0 - 0.0	11	-18(-12%)	-98(-49%) TO 24(18%)
TOTAL	14	-14(-11%)	-98(-49%) TO 26(32%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E00-E03 SP_COND ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	7	-8(-4%)	-25(-13%) TO 25(12%)
TOTAL	7	-8(-4%)	-25(-13%) TO 25(12%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	10	-55(-30%)	-200(-68%) TO 39(37%)
TOTAL	10	-55(-30%)	-200(-68%) TO 39(37%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	17	-36(-19%)	-200(-68%) TO 39(37%)
TOTAL	17	-36(-19%)	-200(-68%) TO 39(37%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E00-E03 TOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	3	1.8(37%)	1.4(29%) TO 2.3(48%)
4.9 - 5.9	2	1.4(27%)	1.3(26%) TO 1.4(27%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	1	-11.8(-44%)	-11.8(-44%) TO -11.8(-44%)
TOTAL	6	-0.6(-7%)	-11.8(-44%) TO 2.3(48%)
SUMMER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	1	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	1	-1.9(-28%)	-1.9(-28%) TO -1.9(-28%)
6.9 - 0.0	6	-8.3(-47%)	-20.5(-75%) TO -2.6(-28%)
TOTAL	8	-6.4(-44%)	-20.5(-75%) TO 0.0(0%)
ANNUAL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	4	1.3(28%)	0.0(0%) TO 2.3(48%)
4.9 - 5.9	2	1.4(27%)	1.3(26%) TO 1.4(27%)
5.9 - 6.9	1	-1.9(-28%)	-1.9(-28%) TO -1.9(-28%)
6.9 - 0.0	7	-8.8(-47%)	-20.5(-75%) TO -2.6(-28%)
TOTAL	14	-3.9(-33%)	-20.5(-75%) TO 2.3(48%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E00-E03 POC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 0.5	1	0.7(140%)	0.7(140%) TO 0.7(140%)
0.5 - 0.9	3	0.4(62%)	0.0(0%) TO 0.7(100%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	1	-10.3(-64%)	-10.3(-64%) TO -10.3(-64%)
TOTAL	5	-1.7(-45%)	-10.3(-64%) TO 0.7(140%)
SUMMER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	1	-1.8(-90%)	-1.8(-90%) TO -1.8(-90%)
2.9 - 0.0	5	-8.6(-61%)	-20.3(-91%) TO -1.7(-32%)
TOTAL	6	-7.4(-62%)	-20.3(-91%) TO -1.7(-32%)
ANNUAL			
0.0 - 0.5	1	0.7(140%)	0.7(140%) TO 0.7(140%)
0.5 - 0.9	3	0.4(62%)	0.0(0%) TO 0.7(100%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	1	-1.8(-90%)	-1.8(-90%) TO -1.8(-90%)
2.9 - 0.0	6	-8.9(-62%)	-20.3(-91%) TO -1.7(-32%)
TOTAL	11	-4.8(-59%)	-20.3(-91%) TO 0.7(140%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E00-E01 DOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	4	1.2(28%)	0.8(19%) TO 1.6(37%)
4.5 - 0.0	1	-1.5(-14%)	-1.5(-14%) TO -1.5(-14%)
TOTAL	5	0.6(11%)	-1.5(-14%) TO 1.6(37%)
SUMMER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	1	-0.2(-5%)	-0.2(-5%) TO -0.2(-5%)
4.0 - 4.5	2	0.6(13%)	0.0(0%) TO 1.1(27%)
4.5 - 0.0	6	-0.9(-16%)	-3.1(-41%) TO 1.2(26%)
TOTAL	9	-0.5(-10%)	-3.1(-41%) TO 1.2(27%)
ANNUAL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	1	-0.2(-5%)	-0.2(-5%) TO -0.2(-5%)
4.0 - 4.5	6	1.0(23%)	0.0(0%) TO 1.6(37%)
4.5 - 0.0	7	-1.0(-15%)	-3.1(-41%) TO 1.2(26%)
TOTAL	14	-0.1(-2%)	-3.1(-41%) TO 1.6(37%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E03-E05 NO2NO3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	5	0(0%)	0(0%)	TO 0(0%)	4(380%)	0(0%)	TO 19(1900%)
20.0 - 50.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%)	TO 0(0%)	400(59%)	400(59%)	TO 400(59%)
500.0 - 0.0	1	400(59%)	400(59%)	TO 400(59%)	70(61%)	0(0%)	TO 400(1900%)
TOTAL	6	67(51%)	0(0%)	TO 400(59%)			
SUMMER							
0.0 - 20.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%)	TO 0(0%)	570(74%)	570(74%)	TO 570(74%)
500.0 - 0.0	1	570(74%)	570(74%)	TO 570(74%)	570(74%)	570(74%)	TO 570(74%)
TOTAL	1	570(74%)	570(74%)	TO 570(74%)			
FALL							
0.0 - 20.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
TOTAL	0	0(0%)	0(0%)	TO 0(0%)			
WINTER							
0.0 - 20.0	2	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
20.0 - 50.0	3	30(82%)	20(60%)	TO 40(133%)	30(82%)	20(60%)	TO 40(133%)
50.0 -150.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%)	TO 0(0%)	18(80%)	0(0%)	TO 40(133%)
TOTAL	5	18(60%)	0(0%)	TO 40(133%)			
ANNUAL							
0.0 - 20.0	7	0(0%)	0(0%)	TO 0(0%)	3(271%)	0(0%)	TO 19(1900%)
20.0 - 50.0	3	30(82%)	20(60%)	TO 40(133%)	30(82%)	20(60%)	TO 40(133%)
50.0 -150.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%)	TO 0(0%)	485(67%)	400(59%)	TO 570(74%)
500.0 - 0.0	2	485(67%)	400(59%)	TO 570(74%)	90(69%)	0(0%)	TO 570(1900%)
TOTAL	12	88(62%)	0(0%)	TO 570(133%)			

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E03-E05 NH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	5	16(80%)	10(50%) TO	30(150%)	31(650%)	29(150%) TO	39(3900%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	1	50(9%)	50(9%) TO	50(9%)	50(9%)	50(9%) TO	50(9%)
TOTAL	6	22(20%)	10(9%) TO	50(150%)	34(364%)	29(9%) TO	50(3900%)
SUMMER							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	1	400(83%)	400(83%) TO	400(83%)	400(83%)	400(83%) TO	400(83%)
TOTAL	1	400(83%)	400(83%) TO	400(83%)	400(83%)	400(83%) TO	400(83%)
FALL							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 - 20.0	2	59(275%)	50(250%) TO	60(300%)	65(614%)	50(250%) TO	79(7900%)
20.0 - 50.0	3	7(17%)	-10(-20%) TO	30(100%)	7(17%)	-10(-20%) TO	30(100%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	26(81%)	-10(-20%) TO	60(300%)	30(106%)	-10(-20%) TO	79(7900%)
ANNUAL							
0.0 - 20.0	7	27(136%)	10(50%) TO	60(300%)	41(633%)	29(150%) TO	79(7900%)
20.0 - 50.0	3	7(17%)	-10(-20%) TO	30(100%)	7(17%)	-10(-20%) TO	30(100%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	2	225(44%)	50(9%) TO	400(83%)	225(44%)	50(9%) TO	400(83%)
TOTAL	12	55(51%)	-10(-20%) TO	400(300%)	63(63%)	-10(-20%) TO	400(7900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E03-E05 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE		K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	
SPRING							
0.0 -200.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
200.0 -300.0	2	100(33%)	100(33%)	TO 100(33%)	100(33%)	100(33%)	TO 100(33%)
300.0 -400.0	1	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
400.0 -900.0	2	-150(-25%)	-300(-60%)	TO 0(0%)	-150(-25%)	-300(-60%)	TO 0(0%)
900.0 - 0.0	1	200(8%)	200(8%)	TO 200(8%)	200(8%)	200(8%)	TO 200(8%)
TOTAL	6	17(2%)	-300(-60%)	TO 200(33%)	17(2%)	-300(-60%)	TO 200(33%)
SUMMER							
0.0 -200.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
900.0 - 0.0	1	1400(108%)	1400(108%)	TO 1400(108%)	1400(108%)	1400(108%)	TO 1400(108%)
TOTAL	1	1400(108%)	1400(108%)	TO 1400(108%)	1400(108%)	1400(108%)	TO 1400(108%)
FALL							
0.0 -200.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
TOTAL	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
WINTER							
0.0 -200.0	5	300(150%)	100(50%)	TO 500(250%)	300(150%)	100(50%)	TO 500(250%)
200.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
TOTAL	5	300(150%)	100(50%)	TO 500(250%)	300(150%)	100(50%)	TO 500(250%)
ANNUAL							
0.0 -200.0	5	300(150%)	100(50%)	TO 500(250%)	300(150%)	100(50%)	TO 500(250%)
200.0 -300.0	2	100(33%)	100(33%)	TO 100(33%)	100(33%)	100(33%)	TO 100(33%)
300.0 -400.0	1	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
400.0 -900.0	2	-150(-25%)	-300(-60%)	TO 0(0%)	-150(-25%)	-300(-60%)	TO 0(0%)
900.0 - 0.0	2	800(41%)	200(8%)	TO 1400(108%)	800(41%)	200(8%)	TO 1400(108%)
TOTAL	12	250(42%)	-300(-60%)	TO 1400(250%)	250(42%)	-300(-60%)	TO 1400(250%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

EOJ-EOS PTOT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	1	12(38%)	12(38%) TO 12(38%)
35.0 - 50.0	2	15(35%)	1(3%) TO 29(58%)
50.0 - 70.0	2	3(4%)	-5(-8%) TO 10(18%)
70.0 - 0.0	1	100(8%)	100(8%) TO 100(8%)
TOTAL	6	25(10%)	-5(-8%) TO 100(58%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	1	-1270(-60%)	-1270(-60%) TO -1270(-60%)
TOTAL	1	-1270(-60%)	-1270(-60%) TO -1270(-60%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	1	124(496%)	124(496%) TO 124(496%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	3	30(66%)	26(64%) TO 33(69%)
50.0 - 70.0	1	31(52%)	31(52%) TO 31(52%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	5	49(111%)	26(52%) TO 124(496%)
ANNUAL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	1	124(496%)	124(496%) TO 124(496%)
25.0 - 35.0	1	12(38%)	12(38%) TO 12(38%)
35.0 - 50.0	5	24(54%)	1(3%) TO 33(69%)
50.0 - 70.0	3	12(20%)	-5(-8%) TO 31(52%)
70.0 - 0.0	2	-585(-35%)	-1270(-60%) TO 100(8%)
TOTAL	12	-73(-23%)	-1270(-60%) TO 124(496%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

EOJ-EOS TURB

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	1	0.4(57%)	0.4(57%) TO 0.4(57%)
1.0 - 5.0	4	1.7(103%)	0.7(30%) TO 2.6(162%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	1	470.0(152%)	470.0(152%) TO 470.0(152%)
TOTAL	6	79.5(150%)	0.4(30%) TO 470.0(162%)
SUMMER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	1	-747.0(-75%)	-747.0(-75%) TO -747.0(-75%)
TOTAL	1	-747.0(-75%)	-747.0(-75%) TO -747.0(-75%)
FALL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 1.0	1	1.4(218%)	1.4(218%) TO 1.4(218%)
1.0 - 5.0	2	0.8(47%)	-0.7(-32%) TO 2.3(192%)
5.0 - 20.0	2	6.6(98%)	2.8(53%) TO 10.3(127%)
20.0 -100.0	1	20.0(34%)	20.0(34%) TO 20.0(34%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	6	6.0(48%)	-0.7(-32%) TO 20.0(218%)
ANNUAL			
0.0 - 1.0	2	0.9(135%)	0.4(57%) TO 1.4(218%)
1.0 - 5.0	6	1.4(84%)	-0.7(-32%) TO 2.6(192%)
5.0 - 20.0	2	6.6(98%)	2.8(53%) TO 10.3(127%)
20.0 -100.0	1	20.0(34%)	20.0(34%) TO 20.0(34%)
100.0 - 0.0	2	-138.5(-21%)	-747.0(-75%) TO 470.0(152%)
TOTAL	13	-18.0(-17%)	-747.0(-75%) TO 470.0(218%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E03-E05 TOTRES — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	5	5(4%)	1(1%) TO 9(7%)
TOTAL	5	5(4%)	1(1%) TO 9(7%)
SUMMER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	1	-1042(-73%)	-1042(-73%) TO -1042(-73%)
TOTAL	1	-1042(-73%)	-1042(-73%) TO -1042(-73%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	1	29(28%)	29(28%) TO 29(28%)
105.0 - 0.0	4	56(42%)	-4(-3%) TO 206(172%)
TOTAL	5	51(39%)	-4(-3%) TO 206(172%)
ANNUAL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	1	29(28%)	29(28%) TO 29(28%)
105.0 - 0.0	10	-79(-30%)	-1042(-73%) TO 206(172%)
TOTAL	11	-69(-28%)	-1042(-73%) TO 206(172%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E03-E05 TOTNFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.0	2	-2(-50%)	-2(-67%) TO -1(-33%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	2	-2(-50%)	-2(-67%) TO -1(-33%)
SUMMER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	1	-1045(-77%)	-1045(-77%) TO -1045(-77%)
TOTAL	1	-1045(-77%)	-1045(-77%) TO -1045(-77%)
FALL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.0	1	15(375%)	15(375%) TO 15(375%)
5.0 - 10.0	1	8(133%)	8(133%) TO 8(133%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	1	32(50%)	32(50%) TO 32(50%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	18(74%)	8(50%) TO 32(375%)
ANNUAL			
0.0 - 5.0	3	4(120%)	-2(-67%) TO 15(375%)
5.0 - 10.0	1	8(133%)	8(133%) TO 8(133%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	1	32(50%)	32(50%) TO 32(50%)
100.0 - 0.0	1	-1045(-77%)	-1045(-77%) TO -1045(-77%)
TOTAL	6	-166(-69%)	-1045(-77%) TO 32(375%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E03-E05 TOTFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	5	2(1%)	-4(-3%) TO 7(5%)
TOTAL	5	2(1%)	-4(-3%) TO 7(5%)
SUMMER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	1	3(4%)	3(4%) TO 3(4%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	1	3(4%)	3(4%) TO 3(4%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	5	3(2%)	-11(-10%) TO 14(14%)
TOTAL	5	3(2%)	-11(-10%) TO 14(14%)
ANNUAL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	1	3(4%)	3(4%) TO 3(4%)
85.0 - 0.0	10	2(2%)	-11(-10%) TO 14(14%)
TOTAL	11	2(2%)	-11(-10%) TO 14(14%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E03-E05 SP_COND ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	6	7(4%)	0(0%) TO 17(9%)
TOTAL	6	7(4%)	0(0%) TO 17(9%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	1	0(0%)	0(0%) TO 0(0%)
TOTAL	1	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	6	13(9%)	-18(-13%) TO 58(56%)
TOTAL	6	13(9%)	-18(-13%) TO 58(56%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	13	9(6%)	-18(-13%) TO 58(56%)
TOTAL	13	9(6%)	-18(-13%) TO 58(56%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E03-E05 TOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	3	0.8(12%)	-0.3(-5%) TO 1.5(24%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	3	0.8(12%)	-0.3(-5%) TO 1.5(24%)
SUMMER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	3	3.7(70%)	1.3(25%) TO 7.6(152%)
5.9 - 6.9	2	0.7(11%)	0.6(10%) TO 0.8(12%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	2.5(43%)	0.6(10%) TO 7.6(152%)
ANNUAL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	3	3.7(70%)	1.3(25%) TO 7.6(152%)
5.9 - 6.9	5	0.7(12%)	-0.3(-5%) TO 1.5(24%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	8	1.8(31%)	-0.3(-5%) TO 7.6(152%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E03-E05 POC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	1	1.1(138%)	1.1(138%) TO 1.1(138%)
0.9 - 1.4	1	-0.7(-58%)	-0.7(-58%) TO -0.7(-58%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	1	1.8(90%)	1.8(90%) TO 1.8(90%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	3	0.7(55%)	-0.7(-58%) TO 1.8(138%)
SUMMER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 0.5	1	2.0(1000%)	2.0(1000%) TO 2.0(1000%)
0.5 - 0.9	1	0.1(11%)	0.1(11%) TO 0.1(11%)
0.9 - 1.4	2	2.8(224%)	-0.3(-23%) TO 5.9(492%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	1	1.8(90%)	1.8(90%) TO 1.8(90%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	1.9(170%)	-0.3(-23%) TO 5.9(1000%)
ANNUAL			
0.0 - 0.5	1	2.0(1000%)	2.0(1000%) TO 2.0(1000%)
0.5 - 0.9	2	0.6(71%)	0.1(11%) TO 1.1(138%)
0.9 - 1.4	3	1.6(132%)	-0.7(-58%) TO 5.9(492%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	2	1.8(90%)	1.8(90%) TO 1.8(90%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	8	1.9(122%)	-0.7(-58%) TO 5.9(1000%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

E03-E05 DOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	1	-0.3(-7%)	-0.3(-7%) TO -0.3(-7%)
4.5 - 0.0	2	0.2(4%)	0.0(0%) TO 0.4(8%)
TOTAL	3	0.0(1%)	-0.3(-7%) TO 0.4(8%)
SUMMER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	2	1.7(42%)	1.6(40%) TO 1.7(45%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	3	-0.1(-3%)	-1.0(-21%) TO 0.5(10%)
TOTAL	5	0.6(13%)	-1.0(-21%) TO 1.7(45%)
ANNUAL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	2	1.7(42%)	1.6(40%) TO 1.7(45%)
4.0 - 4.5	1	-0.3(-7%)	-0.3(-7%) TO -0.3(-7%)
4.5 - 0.0	5	0.0(0%)	-1.0(-21%) TO 0.5(10%)
TOTAL	8	0.4(8%)	-1.0(-21%) TO 1.7(45%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

F01-F03 NO2NO3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
SUMMER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 - 20.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
ANNUAL					
0.0 - 20.0	6	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	6	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

F01-F03 NH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE
SPRING					
0.0 - 20.0	3	0(0%)	0(0%) TO 0(0%)	-6(-86%)	-19(-95%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	3	0(0%)	0(0%) TO 0(0%)	-6(-86%)	-19(-95%) TO 0(0%)
SUMMER					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 - 20.0	2	5(25%)	0(0%) TO 10(50%)	5(25%)	0(0%) TO 10(50%)
20.0 - 50.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	3	3(14%)	0(0%) TO 10(50%)	3(14%)	0(0%) TO 10(50%)
ANNUAL					
0.0 - 20.0	5	2(10%)	0(0%) TO 10(50%)	-2(-15%)	-19(-95%) TO 10(50%)
20.0 - 50.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	6	2(8%)	0(0%) TO 10(50%)	-2(-10%)	-19(-95%) TO 10(50%)

CHANGES I[N] CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

F01-F03 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE
SPRING					
0.0 -200.0	3	33(17%)	0(0%) TO 100(50%)	93(117%)	0(0%) TO 180(900%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 180(900%)
TOTAL	3	33(17%)	0(0%) TO 100(50%)	93(117%)	0(0%) TO 180(900%)
SUMMER					
0.0 -200.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 -200.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 -200.0	2	0(0%)	0(0%) TO 0(0%)	90(83%)	0(0%) TO 180(900%)
200.0 -300.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	3	0(0%)	0(0%) TO 0(0%)	60(35%)	0(0%) TO 180(900%)
ANNUAL					
0.0 -200.0	5	20(10%)	0(0%) TO 100(50%)	92(100%)	0(0%) TO 180(900%)
200.0 -300.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	6	17(8%)	0(0%) TO 100(50%)	77(61%)	0(0%) TO 180(900%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

F01-F03 PTOT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	1	22(110%)	22(110%) TO 22(110%)
20.0 - 25.0	2	35(153%)	26(113%) TO 43(195%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	30(140%)	22(110%) TO 43(195%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	1	33(103%)	33(103%) TO 33(103%)
35.0 - 50.0	1	61(165%)	61(165%) TO 61(165%)
50.0 - 70.0	1	9(14%)	9(14%) TO 9(14%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	34(76%)	9(14%) TO 61(165%)
ANNUAL			
0.0 - 20.0	1	22(110%)	22(110%) TO 22(110%)
20.0 - 25.0	2	35(153%)	26(113%) TO 43(195%)
25.0 - 35.0	1	33(103%)	33(103%) TO 33(103%)
35.0 - 50.0	1	61(165%)	61(165%) TO 61(165%)
50.0 - 70.0	1	9(14%)	9(14%) TO 9(14%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	6	32(97%)	9(14%) TO 61(165%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

F01-F03 TURB

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	1	8.4(840%)	8.4(840%) TO 8.4(840%)
1.0 - 5.0	2	6.5(461%)	1.1(92%) TO 11.8(738%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	3	7.1(561%)	1.1(92%) TO 11.8(840%)
SUMMER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	1	4.0(133%)	1.2(25%) TO 7.2(400%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	1	4.0(133%)	1.2(25%) TO 7.2(400%)
ANNUAL			
0.0 - 1.0	1	8.4(840%)	8.4(840%) TO 8.4(840%)
1.0 - 5.0	5	5.0(210%)	1.1(25%) TO 11.8(738%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	6	5.6(259%)	1.1(25%) TO 11.8(840%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

F01-F03 TOTRES

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	1	5(4%)	3(3%) TO 7(6%)
TOTAL	1	5(4%)	3(3%) TO 7(6%)
SUMMER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	1	-16(-14%)	-16(-14%) TO -16(-14%)
TOTAL	1	-16(-14%)	-16(-14%) TO -16(-14%)
ANNUAL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	4	-0(-0%)	-16(-14%) TO 7(6%)
TOTAL	4	-0(-0%)	-16(-14%) TO 7(6%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

F01-F03 TOTNFILT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 5.0	1	-1(-33%)	-1(-33%) TO -1(-33%)
5.0 - 10.0	2	-1(-13%)	-1(-17%) TO -1(-11%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	-1(-17%)	-1(-33%) TO -1(-11%)
SUMMER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 5.0	1	-1(-33%)	-1(-33%) TO -1(-33%)
5.0 - 10.0	2	-1(-13%)	-1(-17%) TO -1(-11%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	3	-1(-17%)	-1(-33%) TO -1(-11%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

F01-F03 TOTFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	1	6(6%)	4(4%) TO 8(8%)
TOTAL	1	6(6%)	4(4%) TO 8(8%)
SUMMER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	1	-9(-8%)	-9(-8%) TO -9(-8%)
TOTAL	1	-9(-8%)	-9(-8%) TO -9(-8%)
ANNUAL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	4	2(2%)	-9(-8%) TO 8(8%)
TOTAL	4	2(2%)	-9(-8%) TO 8(8%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

F01-F03 SP_COND ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	1	-6(-5%)	-10(-8%) TO -4(-3%)
TOTAL	1	-6(-5%)	-10(-8%) TO -4(-3%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	3	-9(-8%)	-19(-17%) TO -4(-4%)
TOTAL	3	-9(-8%)	-19(-17%) TO -4(-4%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	6	-8(-7%)	-19(-17%) TO -4(-3%)
TOTAL	6	-8(-7%)	-19(-17%) TO -4(-3%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

F01-F03 TOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	1	-0.5(-9%)	-0.5(-9%) TO -0.5(-9%)
5.9 - 6.9	2	-0.1(-1%)	-0.1(-2%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	3	-0.2(-3%)	-0.5(-9%) TO 0.0(0%)
SUMMER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	2	0.3(4%)	0.1(1%) TO 0.4(6%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	0.3(4%)	0.1(1%) TO 0.4(6%)
ANNUAL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	1	-0.5(-9%)	-0.5(-9%) TO -0.5(-9%)
5.9 - 6.9	4	0.1(2%)	-0.1(-2%) TO 0.4(6%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	-0.0(-0%)	-0.5(-9%) TO 0.4(6%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

F01-F03 POC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	1	0.4(50%)	0.4(50%) TO 0.4(50%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	2	-0.9(-17%)	-1.3(-62%) TO -0.4(-16%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	3	-0.4(-24%)	-1.3(-62%) TO 0.4(50%)
SUMMER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	1	0.5(63%)	0.5(63%) TO 0.5(63%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	1	-0.4(-17%)	-0.4(-17%) TO -0.4(-17%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	0.1(3%)	-0.4(-17%) TO 0.5(63%)
ANNUAL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	2	0.5(56%)	0.4(50%) TO 0.5(63%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	3	-0.7(-30%)	-1.3(-62%) TO -0.4(-16%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	-0.2(-14%)	-1.3(-62%) TO 0.5(63%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

FG1-FG3 DOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	1	0.8(23%)	0.8(23%) TO 0.8(23%)
3.5 - 4.0	1	0.4(10%)	0.4(10%) TO 0.4(10%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	1	-0.5(-9%)	-0.5(-9%) TO -0.5(-9%)
TOTAL	3	0.2(5%)	-0.5(-9%) TO 0.8(23%)
SUMMER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	1	0.8(21%)	0.8(21%) TO 0.8(21%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	1	-0.4(-7%)	-0.4(-7%) TO -0.4(-7%)
TOTAL	2	0.2(4%)	-0.4(-7%) TO 0.8(21%)
ANNUAL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	1	0.8(23%)	0.8(23%) TO 0.8(23%)
3.5 - 4.0	2	0.6(16%)	0.4(10%) TO 0.8(21%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	2	-0.5(-8%)	-0.5(-9%) TO -0.4(-7%)
TOTAL	5	0.2(5%)	-0.5(-9%) TO 0.8(23%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

ACTUAL CHANGE(PERCENT CHANGE)

C11-G02 NO2NO3

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	2	0(0%)	0(0%) TO	0(0%)	-10(-90%)	-19(-95%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	1	-80(-80%)	-80(-80%) TO	-80(-80%)	-99(-99%)	-99(-99%) TO	-99(-99%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	1	-780(-95%)	-780(-95%) TO	-780(-95%)	-780(-95%)	-780(-95%) TO	-780(-95%)
TOTAL	4	-215(-90%)	-780(-95%) TO	0(0%)	-225(-95%)	-780(-99%) TO	0(0%)
SUMMER							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
FALL							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
ANNUAL							
0.0 - 20.0	2	0(0%)	0(0%) TO	0(0%)	-10(-90%)	-19(-95%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -150.0	1	-80(-80%)	-80(-80%) TO	-80(-80%)	-99(-99%)	-99(-99%) TO	-99(-99%)
150.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -500.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
500.0 - 0.0	1	-780(-95%)	-780(-95%) TO	-780(-95%)	-780(-95%)	-780(-95%) TO	-780(-95%)
TOTAL	4	-215(-90%)	-780(-95%) TO	0(0%)	-225(-95%)	-780(-99%) TO	0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G11-G02 NH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	2	30(150%)	0(0%) TO	60(300%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	1	-10(-25%)	-10(-25%) TO	-10(-25%)	-10(-25%)	-10(-25%) TO	-10(-25%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	1	-150(-20%)	-150(-20%) TO	-150(-20%)	-150(-20%)	-150(-20%) TO	-150(-20%)
TOTAL	4	-25(-12%)	-150(-25%) TO	60(300%)	-40(-20%)	-150(-25%) TO	0(0%)
SUMMER							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
FALL							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
ANNUAL							
0.0 - 20.0	2	30(150%)	0(0%) TO	60(300%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	1	-10(-25%)	-10(-25%) TO	-10(-25%)	-10(-25%)	-10(-25%) TO	-10(-25%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	1	-150(-20%)	-150(-20%) TO	-150(-20%)	-150(-20%)	-150(-20%) TO	-150(-20%)
TOTAL	4	-25(-12%)	-150(-25%) TO	60(300%)	-40(-20%)	-150(-25%) TO	0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G11-G02 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE		K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE	
SPRING							
0.0 -200.0	2	200(100%)	100(50%) TO	300(150%)	200(100%)	100(50%) TO	300(150%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	2	350(17%)	-100(-8%) TO	800(28%)	350(17%)	-100(-8%) TO	800(28%)
TOTAL	4	275(24%)	-100(-8%) TO	800(150%)	275(24%)	-100(-8%) TO	800(150%)
SUMMER							
0.0 -200.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
FALL							
0.0 -200.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 -200.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
ANNUAL							
0.0 -200.0	2	200(100%)	100(50%) TO	300(150%)	200(100%)	100(50%) TO	300(150%)
200.0 -300.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
900.0 - 0.0	2	350(17%)	-100(-8%) TO	800(28%)	350(17%)	-100(-8%) TO	800(28%)
TOTAL	4	275(24%)	-100(-8%) TO	800(150%)	275(24%)	-100(-8%) TO	800(150%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G11-G02 PTOT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	1	15(24%)	15(24%) TO 15(24%)
70.0 - 0.0	3	4(2%)	-47(-45%) TO 72(18%)
TOTAL	4	7(4%)	-47(-45%) TO 72(24%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	1	15(24%)	15(24%) TO 15(24%)
70.0 - 0.0	3	4(2%)	-47(-45%) TO 72(18%)
TOTAL	4	7(4%)	-47(-45%) TO 72(24%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G11-G02 TURB

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	1	0.3(6%)	0.3(6%) TO 0.3(6%)
5.0 - 20.0	2	-3.9(-34%)	-4.8(-50%) TO -3.0(-23%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	1	52.0(39%)	52.0(39%) TO 52.0(39%)
TOTAL	4	11.1(27%)	-4.8(-50%) TO 52.0(39%)
SUMMER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	1	0.3(6%)	0.3(6%) TO 0.3(6%)
5.0 - 20.0	2	-3.9(-34%)	-4.8(-50%) TO -3.0(-23%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	1	52.0(39%)	52.0(39%) TO 52.0(39%)
TOTAL	4	11.1(27%)	-4.8(-50%) TO 52.0(39%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G11-G02 TOTRES ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	2	7(8%)	-2(-2%) TO 15(19%)
105.0 - 0.0	2	33(18%)	-3(-2%) TO 69(29%)
TOTAL	4	20(15%)	-3(-2%) TO 69(29%)
SUMMER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	2	7(8%)	-2(-2%) TO 15(19%)
105.0 - 0.0	2	33(18%)	-3(-2%) TO 69(29%)
TOTAL	4	20(15%)	-3(-2%) TO 69(29%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G11-G02 TOTNFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	2	4(26%)	0(0%) TO 7(44%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	1	-54(-39%)	-54(-39%) TO -54(-39%)
TOTAL	3	-16(-28%)	-54(-39%) TO 7(44%)
SUMMER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	2	4(26%)	0(0%) TO 7(44%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	1	-54(-39%)	-54(-39%) TO -54(-39%)
TOTAL	3	-16(-28%)	-54(-39%) TO 7(44%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G11-G02 TOTFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	1	15(22%)	15(22%) TO 15(22%)
69.0 - 85.0	1	15(19%)	15(19%) TO 15(19%)
85.0 - 0.0	2	57(54%)	-10(-9%) TO 123(131%)
TOTAL	4	36(40%)	-10(-9%) TO 123(131%)
SUMMER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	1	15(22%)	15(22%) TO 15(22%)
69.0 - 85.0	1	15(19%)	15(19%) TO 15(19%)
85.0 - 0.0	2	57(54%)	-10(-9%) TO 123(131%)
TOTAL	4	36(40%)	-10(-9%) TO 123(131%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G11-G02 SP_COND — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	4	77(81%)	22(22%) TO 221(248%)
TOTAL	4	77(81%)	22(22%) TO 221(248%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	4	77(81%)	22(22%) TO 221(248%)
TOTAL	4	77(81%)	22(22%) TO 221(248%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G11-G02 TOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	1	0.5(8%)	0.5(8%) TO 0.5(8%)
5.9 - 6.9	1	-0.3(-5%)	-0.3(-5%) TO -0.3(-5%)
6.9 - 0.0	2	-4.8(-30%)	-5.4(-32%) TO -4.2(-28%)
TOTAL	4	-2.4(-21%)	-5.4(-32%) TO 0.5(8%)
SUMMER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	1	0.5(8%)	0.5(8%) TO 0.5(8%)
5.9 - 6.9	1	-0.3(-5%)	-0.3(-5%) TO -0.3(-5%)
6.9 - 0.0	2	-4.8(-30%)	-5.4(-32%) TO -4.2(-28%)
TOTAL	4	-2.4(-21%)	-5.4(-32%) TO 0.5(8%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G11-G02 POC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	3	-0.3(-12%)	-0.4(-15%) TO -0.2(-8%)
2.9 - 0.0	1	-6.5(-80%)	-6.5(-80%) TO -6.5(-80%)
TOTAL	4	-1.9(-48%)	-6.5(-80%) TO -0.2(-8%)
SUMMER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	3	-0.3(-12%)	-0.4(-15%) TO -0.2(-8%)
2.9 - 0.0	1	-6.5(-80%)	-6.5(-80%) TO -6.5(-80%)
TOTAL	4	-1.9(-48%)	-6.5(-80%) TO -0.2(-8%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G11-G02 DOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	1	0.7(20%)	0.7(20%) TO 0.7(20%)
3.5 - 4.0	1	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	2	-1.4(-12%)	-3.8(-36%) TO 1.1(10%)
TOTAL	4	-0.5(-7%)	-3.8(-36%) TO 1.1(20%)
SUMMER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	1	0.7(20%)	0.7(20%) TO 0.7(20%)
3.5 - 4.0	1	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	2	-1.4(-12%)	-3.8(-36%) TO 1.1(10%)
TOTAL	4	-0.5(-7%)	-3.8(-36%) TO 1.1(20%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G03 NO2NO3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	4	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
50.0 -150.0	1	-110(-85%)	-110(-85%)	TO -110(-85%)	-110(-85%)	-110(-85%)	TO -110(-85%)
150.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
TOTAL	5	-22(-52%)	-110(-85%)	TO 0(0%)	-22(-82%)	-110(-85%)	TO 0(0%)
SUMMER							
0.0 - 20.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
TOTAL	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
FALL							
0.0 - 20.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
TOTAL	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
WINTER							
0.0 - 20.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
50.0 -150.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
150.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
TOTAL	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
ANNUAL							
0.0 - 20.0	4	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
20.0 - 50.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
50.0 -150.0	1	-110(-85%)	-110(-85%)	TO -110(-85%)	-110(-85%)	-110(-85%)	TO -110(-85%)
150.0 -300.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
300.0 -500.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
500.0 - 0.0	0	0(0%)	0(0%)	TO 0(0%)	0(0%)	0(0%)	TO 0(0%)
TOTAL	5	-22(-52%)	-110(-85%)	TO 0(0%)	-22(-82%)	-110(-85%)	TO 0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G03 NH3

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE		K VALUE = 1 UG MEAN	K VALUE = 1 UG RANGE	
SPRING							
0.0 - 20.0	3	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	1	-10(-33%)	-10(-33%) TO	-10(-33%)	-29(-97%)	-29(-97%) TO	-29(-97%)
50.0 -100.0	1	-60(-75%)	-60(-75%) TO	-60(-75%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	-14(-41%)	-60(-75%) TO	0(0%)	-6(-85%)	-29(-97%) TO	0(0%)
SUMMER							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
FALL							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
WINTER							
0.0 - 20.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
50.0 -100.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
ANNUAL							
0.0 - 20.0	3	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
20.0 - 50.0	1	-10(-33%)	-10(-33%) TO	-10(-33%)	-29(-97%)	-29(-97%) TO	-29(-97%)
50.0 -100.0	1	-60(-75%)	-60(-75%) TO	-60(-75%)	0(0%)	0(0%) TO	0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO	0(0%)	0(0%)	0(0%) TO	0(0%)
TOTAL	5	-14(-41%)	-60(-75%) TO	0(0%)	-6(-85%)	-29(-97%) TO	0(0%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G01 KJEL

ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	K VALUE = 200 UG MEAN	K VALUE = 200 UG RANGE	K VALUE = 20 UG MEAN	K VALUE = 20 UG RANGE
SPRING					
0.0 -200.0	1	300(150%)	300(150%) TO 300(150%)	300(150%)	300(150%) TO 300(150%)
200.0 -300.0	2	50(17%)	0(0%) TO 100(33%)	50(17%)	0(0%) TO 100(33%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	1	-600(-55%)	-600(-55%) TO -600(-55%)	-600(-55%)	-600(-55%) TO -600(-55%)
TOTAL	5	-40(-8%)	-600(-55%) TO 300(150%)	-40(-8%)	-600(-55%) TO 300(150%)
SUMMER					
0.0 -200.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
FALL					
0.0 -200.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
WINTER					
0.0 -200.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
200.0 -300.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
ANNUAL					
0.0 -200.0	1	300(150%)	300(150%) TO 300(150%)	300(150%)	300(150%) TO 300(150%)
200.0 -300.0	2	50(17%)	0(0%) TO 100(33%)	50(17%)	0(0%) TO 100(33%)
300.0 -400.0	0	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
400.0 -900.0	1	0(0%)	0(0%) TO 0(0%)	0(0%)	0(0%) TO 0(0%)
900.0 - 0.0	1	-600(-55%)	-600(-55%) TO -600(-55%)	-600(-55%)	-600(-55%) TO -600(-55%)
TOTAL	5	-40(-8%)	-600(-55%) TO 300(150%)	-40(-8%)	-600(-55%) TO 300(150%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G03 PTOT

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	1	30(81%)	30(81%) TO 30(81%)
50.0 - 70.0	1	24(41%)	24(41%) TO 24(41%)
70.0 - 0.0	3	-42(-45%)	-78(-60%) TO -20(-28%)
TOTAL	5	-14(-19%)	-78(-60%) TO 30(81%)
SUMMER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	0	0(0%)	0(0%) TO 0(0%)
50.0 - 70.0	0	0(0%)	0(0%) TO 0(0%)
70.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 - 25.0	0	0(0%)	0(0%) TO 0(0%)
25.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 50.0	1	30(81%)	30(81%) TO 30(81%)
50.0 - 70.0	1	24(41%)	24(41%) TO 24(41%)
70.0 - 0.0	3	-42(-45%)	-78(-60%) TO -20(-28%)
TOTAL	5	-14(-19%)	-78(-60%) TO 30(81%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G03 TURB

INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	2	-0.7(-14%)	-0.8(-16%) TO -0.6(-13%)
5.0 - 20.0	2	-4.4(-51%)	-6.7(-65%) TO -2.1(-30%)
20.0 -100.0	1	-61.8(-92%)	-61.8(-92%) TO -61.8(-92%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	-14.4(-77%)	-61.8(-92%) TO -0.6(-13%)
SUMMER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.0 - 20.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
20.0 -100.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 1.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.0 - 5.0	2	-0.7(-14%)	-0.8(-16%) TO -0.6(-13%)
5.0 - 20.0	2	-4.4(-51%)	-6.7(-65%) TO -2.1(-30%)
20.0 -100.0	1	-61.8(-92%)	-61.8(-92%) TO -61.8(-92%)
100.0 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	5	-14.4(-77%)	-61.8(-92%) TO -0.6(-13%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G03 TOTRES — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	3	17(20%)	9(10%) TO 24(30%)
105.0 - 0.0	2	-26(-21%)	-30(-24%) TO -22(-18%)
TOTAL	5	-0(-0%)	-30(-24%) TO 24(30%)
SUMMER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	0	0(0%)	0(0%) TO 0(0%)
105.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 45.0	0	0(0%)	0(0%) TO 0(0%)
45.0 - 55.0	0	0(0%)	0(0%) TO 0(0%)
55.0 - 65.0	0	0(0%)	0(0%) TO 0(0%)
65.0 - 75.0	0	0(0%)	0(0%) TO 0(0%)
75.0 -105.0	3	17(20%)	9(10%) TO 24(30%)
105.0 - 0.0	2	-26(-21%)	-30(-24%) TO -22(-18%)
TOTAL	5	-0(-0%)	-30(-24%) TO 24(30%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G03 TOTNFILT — ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	1	3(43%)	3(43%) TO 3(43%)
10.0 - 20.0	1	-1(-9%)	-1(-9%) TO -1(-9%)
20.0 -100.0	2	-18(-72%)	-19(-83%) TO -17(-63%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	4	-9(-50%)	-19(-83%) TO 3(43%)
SUMMER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	0	0(0%)	0(0%) TO 0(0%)
10.0 - 20.0	0	0(0%)	0(0%) TO 0(0%)
20.0 -100.0	0	0(0%)	0(0%) TO 0(0%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 5.0	0	0(0%)	0(0%) TO 0(0%)
5.0 - 10.0	1	3(43%)	3(43%) TO 3(43%)
10.0 - 20.0	1	-1(-9%)	-1(-9%) TO -1(-9%)
20.0 -100.0	2	-18(-72%)	-19(-83%) TO -17(-63%)
100.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	4	-9(-50%)	-19(-83%) TO 3(43%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G03 TOTFILT ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	2	13(16%)	10(12%) TO 15(19%)
85.0 - 0.0	3	6(6%)	-11(-11%) TO 34(35%)
TOTAL	5	9(9%)	-11(-11%) TO 34(35%)
SUMMER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	0	0(0%)	0(0%) TO 0(0%)
85.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 35.0	0	0(0%)	0(0%) TO 0(0%)
35.0 - 49.0	0	0(0%)	0(0%) TO 0(0%)
49.0 - 59.0	0	0(0%)	0(0%) TO 0(0%)
59.0 - 69.0	0	0(0%)	0(0%) TO 0(0%)
69.0 - 85.0	2	13(16%)	10(12%) TO 15(19%)
85.0 - 0.0	3	6(6%)	-11(-11%) TO 34(35%)
TOTAL	5	9(9%)	-11(-11%) TO 34(35%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G03 SP_COND ACTUAL CHANGE(PERCENT CHANGE)

INPUT CLASS	N	MEAN	RANGE
SPRING			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	5	6(5%)	-23(-15%) TO 25(24%)
TOTAL	5	6(5%)	-23(-15%) TO 25(24%)
SUMMER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
FALL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
WINTER			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	0	0(0%)	0(0%) TO 0(0%)
TOTAL	0	0(0%)	0(0%) TO 0(0%)
ANNUAL			
0.0 - 5.5	0	0(0%)	0(0%) TO 0(0%)
5.5 - 8.5	0	0(0%)	0(0%) TO 0(0%)
8.5 - 12.5	0	0(0%)	0(0%) TO 0(0%)
12.5 - 15.5	0	0(0%)	0(0%) TO 0(0%)
15.5 - 18.0	0	0(0%)	0(0%) TO 0(0%)
18.0 - 0.0	5	6(5%)	-23(-15%) TO 25(24%)
TOTAL	5	6(5%)	-23(-15%) TO 25(24%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G03 TOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	1	0.6(10%)	0.6(10%) TO 0.6(10%)
5.9 - 6.9	1	0.1(2%)	0.1(2%) TO 0.1(2%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	0.4(6%)	0.1(2%) TO 0.6(10%)
SUMMER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
5.9 - 6.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 3.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.9 - 4.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.9 - 5.9	1	0.6(10%)	0.6(10%) TO 0.6(10%)
5.9 - 6.9	1	0.1(2%)	0.1(2%) TO 0.1(2%)
6.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	0.4(6%)	0.1(2%) TO 0.6(10%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G03 POC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	1	0.5(50%)	0.5(50%) TO 0.5(50%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	1	0.3(14%)	0.3(14%) TO 0.3(14%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	0.4(26%)	0.3(14%) TO 0.5(50%)
SUMMER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 0.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.5 - 0.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
0.9 - 1.4	1	0.5(50%)	0.5(50%) TO 0.5(50%)
1.4 - 1.9	0	0.0(0%)	0.0(0%) TO 0.0(0%)
1.9 - 2.9	1	0.3(14%)	0.3(14%) TO 0.3(14%)
2.9 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	2	0.4(26%)	0.3(14%) TO 0.5(50%)

CHANGES IN CONSTITUENT CONCENTRATIONS WITHIN THE MEADOWLANDS

G02-G03 DOC INPUT CLASS	N	ACTUAL CHANGE(PERCENT CHANGE) MEAN	RANGE
SPRING			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	1	-0.2(-5%)	-0.2(-5%) TO -0.2(-5%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	1	0.1(2%)	0.1(2%) TO 0.1(2%)
TOTAL	2	-0.1(-1%)	-0.2(-5%) TO 0.1(2%)
SUMMER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
FALL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
WINTER			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
TOTAL	0	0.0(0%)	0.0(0%) TO 0.0(0%)
ANNUAL			
0.0 - 2.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
2.5 - 3.0	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.0 - 3.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
3.5 - 4.0	1	-0.2(-5%)	-0.2(-5%) TO -0.2(-5%)
4.0 - 4.5	0	0.0(0%)	0.0(0%) TO 0.0(0%)
4.5 - 0.0	1	0.1(2%)	0.1(2%) TO 0.1(2%)
TOTAL	2	-0.1(-1%)	-0.2(-5%) TO 0.1(2%)

APPENDIX D

NUTRIENT CONTRIBUTIONS FROM VOLCANIC CINDER STUDY

A special study was conducted to determine possible nutrient contributions from the application of volcanic cinder to roadways as an anti-skid road abrasive. Samples of both unused cinder from the Meyers Cal-Trans stockpile and used cinder from the snow disposal site on Sierra Boulevard in South Lake Tahoe were analyzed to determine if significant amounts of nutrients had been leached out. One hundred grams of volcanic cinder was placed in a 12.5 µm wire mesh filtering apparatus. The cinder was then treated three consecutive times with a 130 ml wash of deionized water or three consecutive times with a 130 ml wash of stream water. Samples were then poured into a four ounce Nalgene bottle, preserved with mercuric chloride and shipped to EMSL-Las Vegas for analysis.

Significant differences were found with the Student t-test for total phosphorus, total dissolved phosphorus, ortho-phosphorus, and total alkalinity between used and unused volcanic cinders. The used cinders had lower concentrations indicating a leaching of these constituents had occurred. Levels of KJEL-N, NO_2+NO_3-N, and NH_3-N remained unaffected. The levels of phosphorus leached from the cinder are many times higher than the background levels in the streams, therefore, the use of volcanic cinder in highway maintenance represents a source of phosphorus enrichment to tributary streams and, ultimately, to Lake Tahoe.

TABLE D-1. VOLCANIC CINDER PHOSPHORUS (µg/l) AND TOTAL ALKALINITY (mg/l $CaCO_3$) MEAN CONTRIBUTIONS

	PTOT	PORTHO	PDISS	TALK
Unused Cinder + Stream Water Wash (N=3)	610	154	176	21
Used Cinder + Stream Water Wash (N=3)	410	57	83	13
t-value	1.20	54.44*	25.469*	11.628*
Unused Cinder + Deionized Water Wash (N=3)	960	180	191	20
Used Cinder + Deionized Water Wash (N=3)	310	78	99	10
t-value	4.31*	6.83*	6.154*	4.8*
Stream Water Blank	84	14	22	12
Deionized Water Blank	20	19	24	K10**

* = significance at the 0.05 level of probability.
** = K value known to be less.